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ABSTRACT

This Association of Research Libraries (ARL) kit on preservation of library materials contains: (1) descriptions of preservation programs and objectives from Boston University, the University of Michigan, University of Wisconsin, and University of California at Los Angeles; (2) a description of the Library of Congress' National Preservation Program and expectations for the program from University of California at Berkeley; (3) binding specifications from University of Connecticut, University of Missouri, and University of Massachusetts; and (4) planning documents for binding requirements from Washington University, University of Connecticut, Syracuse University, University of Georgia, and Dartmouth College. At the beginning, a concise summary of a 1977 survey of ARL members focuses on preservation planning, commercial versus in-house binding/restoration, other preservation efforts including microfilming, the National Preservation Program, and future trends. (THC)

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Preservation of Library Materials

Kit 35

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SPEC KIT EVALUATION

The materials in this Kit were collected from a survey of the member libraries of the Association of Research Libraries. They were selected for inclusion here because they are among the best examples received of current management practices in academic and research libraries.

These documents are working tools developed by individual libraries to meet their specific purposes. The materials are not intended to provide models or prototype systems that can simply be copied by other libraries. Instead, these illustrations should stimulate further innovation and improvement in the management practices of academic and research libraries.

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August 1977 No. 35

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PRESERVATION OF LIBRARY MATERIALS

With paper quality deteriorating, binding technology frequently damaging books, and libraries suffering the effects of inflation, preservation has become an important concern. But as library funding grows tighter, it is more difficult for library administrators to justify preservation expenditures when scholars and researchers must be denied current acquisitions as a result. In April 1977 a SPEC survey was distributed to ARL members to determine the extent of preservation programs and their relationship to overall collection programs. The survey results indicate that while few libraries have a codified preservation program, there is growing recognition of the need to plan for such a program.

PRESERVATION PLANNING. Since the magnitude of the preservation problem is only beginning to be fully understood, it is not surprising that few libraries have a formal preservation plan or full-time staff assigned to the task of designing and implementing a preservation program. However, concern is growing and nearly all responding libraries indicate the need for a plan and at least a part-time staff person. A main concern involves books published after 1840 on poor quality paper. These books, often so brittle that they are easily damaged by use, are of value mainly for their content, and microfilming is seen as a possible solution. Second, libraries want to preserve materials published before 1840, usually on high quality paper, which are incurring damage mainly as a result of normal wear and tear. A third concern is assuring the maintenance of today's books into the next century. And finally, libraries are investigating cooperative preservation programs, and determining how to interact with them.

COMMERCIAL VS. IN-HOUSE BINDING/RESTORATION. The major preservation investment made by ARL libraries is in the area of binding, as evidenced by an average of $97,000 per ARL library spent per year. The focus of binding programs is on serials, and most of the member libraries have established firm policies for binding any paperbound book before it goes into the stacks. Many libraries have a bindery staff, either as a sub-unit of a technical services department or as a separate department reporting to the Assistant Director for Technical Services. It is usually the responsibility of the staff to decide which materials should receive priority, and which materials require commercial binding. The primary tasks of an internal bindery unit are rebinding, minor repairing, and preparing materials to be sent to a commercial binding firm. As more libraries enter into cooperative preservation programs or start their own, the need for training programs or workshops is likely to increase.

Few comparative studies have been made to determine the cost effectiveness of these bindery operations, partially because the tasks undertaken internally are quite different from those of the commercial firms. The costs of commercial binding reported by member libraries range from $3.20 - $7.87 per volume for serials and from $1.58 - $6.22 for rebinding. Average costs for in-house binding range from $1.00 to $3.75 per volume. Relatively few libraries limit the binderies they use to those that are members of the Library Binding Institute. Rather, the primary consideration appears to be whether the binder will adhere to the library's specifications, which are often quite rigorous. There is at least some interest in experimenting with cheaper binding. For certain categories of material, e.g., those readily available

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elsewhere or non-scholarly journals, it may be reasonable to lower binding standards and to use the resulting financial savings for more serious preservation or conservation needs.

OTHER PRESERVATION EFFORTS. Next to binding, microfilming is the most common method of preserving materials. More than half of the responding libraries report in-house microfilming facilities while others have access to on-campus equipment. Microfilming is relatively expensive, but the cost is inconsequential compared with the cost of book restoration. The real value of microfilming is in preserving the content of brittle materials that cannot be restored. There is, however, some concern over the life of microfilm, and there is not a great deal of experience with microfilm longevity on which decisions can be made.

While there are only scattered programs for preserving non-print materials, there is growing interest in this area as well. Fourteen libraries have initiated climate control programs for non-print materials and another nine libraries have begun to reproduce copies of non-print materials for use from archival master copies of phonodiscs, films, and other formats.

NATIONAL PRESERVATION PROGRAM. The most encouraging sign of progress is the Library of Congress's demonstration of its commitment to preservation by initiating a National Preservation Plan. The expectations for this program vary a great deal from library to library, with many looking to it for standards, guidance on local preservation efforts, and as a center for rare or little used materials. In addition, many libraries look to the Program as a resource for training of local staff.

FUTURE TRENDS. In addition to rebinding and microfilming of materials already on library shelves, there must be efforts to implement strict environmental controls where books are housed. Air conditioning, humidity control, and regular cleaning and dusting are essential if library materials purchased today are to be usable in the future.

A comprehensive preservation plan probably will include affiliation with the National Preservation Program and other cooperative local or regional efforts. Careful consideration should be given to what requirements a library must meet to become involved and what benefits will be derived. The New England Document Conservation Center, for instance, restores materials for its members and advises on local conditions to prevent further problems. Secondly, libraries will need to study the cost effectiveness and appropriateness of activities such as microfilming, in-house vs. commercial binding, environmental controls and staff training programs. A third consideration is developing or taking advantage of existing alternatives to preservation, since many ARL libraries have not been able to afford to preserve the many books already in poor condition, or to develop preventive programs for the future. Buying reprints of valuable materials is a partial solution, because some libraries' budgets for reprints are more flexible than preservation budgets. Another partial solution is to be selective about retaining materials. Subject specialists can be consulted about the long-term value of a volume before expensive steps are taken to preserve it. Another potential is in the area of paper research. The Barrow Laboratory made significant progress in developing mass quantity techniques for deacidifying paper.

And, finally, libraries can promote conservation efforts by making patrons and administrators aware of the problems caused by poor paper quality and poor environmental conditions. Once the problem is understood, meaningful steps can be taken to develop a sound, unified approach to assuring the continued availability and use of the research materials housed in ARL libraries.

The Kit on Preservation of Library Materials contains 14 documents (85 pages) including preservation program descriptions and outlines, National Preservation Program description, binding specifications, and planning documents for binding requirements. The kit is available to ARL members and SPEC subscribers for $7.50 and to all others for $15.00. (Prepayment preferred.)

PRESERVATION OF LIBRARY MATERIALS

KIT NO. 35 - AUGUST 1977

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PRESERVATION PROGRAM OBJECTIVES

A. Environment

1. Make recommendations which will provide for the stabilization, monitoring and regulation of the temperature and humidity levels in the Library at optimum conditions as appropriate to the several areas of the Collection.
2. Make recommendations which will provide for the installation of alkaline air scrubbers in the Library's environmental control system.
3. Make recommendations which will provide for the installation of ultraviolet shielding of the flourescent lighting in the Library.
4. Make recommendations which will provide for proper housekeeping in the Library, including regular and thorough sweeping , dusting and cleaning of all stack areas.
5. Make recommendations which will provide for the elimination of fungi, insects and vermin as necessary.
6. Make recommendations which will provide for the replacement of the soda-acid fire extinguishers, now in use, with the safer CO_2 type.
7. Make recommendations which will provide for the cleaning up of the sub-basement area.

B. Preventative Preservation

1. Provide for the ongoing inspection and preventative preservation of Library materials in all parts of the Collection.
2. Prepare a "disaster plan" which would detail measures to be taken to preserve materials in the event of fire, water or other emergencies.

C. Restoration

1. Treat and repair materials needing attention and restoration within the Library whenever possible.
2. Provide for professional restoration of items as necessary and appropriate.
3. Provide for the replacement of highly acid boxes and other containers, which are currently being used to house Library materials, with de-acidified containers.

D. Related Activities

1. Provide high quality training and experience in Preservation principles, practices and techniques to the Department staff.
2. Cooperate and work with Conservation Centers and with other Libraries and institutions involved in Preservation.
3. Purchase supplies and equipment as necessary.
4. Provide consultation and service to the University Community in matters relating to Preservation.

THE UNIVERSITY OF MICHIGAN
UNIVERSITY LIBRARY

PRESERVATION PROGRAMS
The University of Michigan
1 pp.

June 18, 1976

STAFF CIRCULAR No. C10

SUBJECT: University Library Conservation Program

Effective immediately, a working group is established to review the requirements of a conservation program for the book collections of the University Library. The group is charged with defining standards for protecting the book collections, developing descriptive guidelines for maintaining the standards, and proposing assignment of responsibility for following the guidelines to specific units of the Library.

The report of the group will consider the following areas, in addition to such others as they may determine:

(1) General provisions for the protection, conservation and restoration of the collections.

(2) Categories of binding for specific types of publications, defined by physical and/or bibliographic characteristics.

(3) Conditions under which rebinding is feasible, and the types of rebinding to be used in each case.

(4) A review of alternative methods for the recommended methods for specific types of materials.

(5) Proposed schedules for inspecting and cleaning of the book collections and methods to be used.

(6) Proposals for controlled access to rare or valuable publications now shelved in open stacks.

(7) Implications of a conservation program for book selection policies and for the allocation of book funds.

PRESERVATION PROGRAMS
University of Wisconsin
14 pp.

S T A T E M E N T

on the

C O N S E R V A T I O N O F L I B R A R Y M A T E R I A L S

Prepared by the

Preservation of Library Materials Committee

of the

University of Wisconsin-Madison Library System

July, 1976

Editors: R. Suder
N. Crossfield
J. Larson

Statement on the Conservation of Library Materials

Historically, the primary focus of libraries has been the systematic collection of large quantities of diverse material in an effort to fill the informational and scholarly needs of the community. While libraries continue to function in this capacity, certain problems have developed within the collections which negate a simple acquisition-storage philosophy. A Library of Congress survey taken in 1973 revealed that 6 million out of its 17 million books were "too brittle to be given to the user."[1] This is roughly 40 percent of its collection. The bulk of research library collections has been printed since 1850, at which time papermaking became cheaper through the introduction of new chemical processes. These processes resulted in an inferior quality of paper with impurities and a high acid content causing the condition known as "brittleness." The Library of Congress has estimated that keeping only 10 percent of the 6 million books (i.e., 600,000 volumes), and restoring 20,000 per year, will require 30 years and 18 million dollars.[2] Frazer Poole, Assistant Director for Preservation at the Library of Congress, pointed out in 1971 that 97 percent of the non-fiction books published between 1900 and 1939 will have deteriorated to the point of being unusable well before the end of this century.[3]

1 Shelly, Karen Lee. "The future of conservation in research libraries." Journal of Academic Librarianship, v. 1, no. 6 (Jan. 1976), p. 15.
2 Ibid.
3 Poole, Frazer. "Thoughts on the conservation of library materials." Library and Archives. Boston: Boston Athenaeum, 1972. p. 19.

These findings and projections are equally true of many major libraries in the United States, and underline the necessity for conservation measures.[4] Such measures will require financial support. At this point, the cost of preservation is difficult to determine because methods are not yet established providing accurate estimates of the annual monetary value of book deterioration. In a detailed report to the Department of Health, Education and Welfare, Warren J. Haas has observed, "The financial dimension of the problem will, in the end, be established by the amount of money spent for preservation."[5]

These statistics raise one crucial question. What is the value of information? Certainly there are economic and organizational problems in any course of action, but there are social implications in our failure to act, since we are speaking of the preservation of a cultural heritage. The need for the establishment of a conservation office is immediate, when thousands of volumes annually are made useless from deterioration. Yet few libraries have even attempted to formulate a comprehensive preservation policy or establish priorities toward a preservation program. It cannot be emphasized too strongly that this projected program must be a continual and not a sporadic effort, and that funding will reflect this commitment.

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[4] The term "conservation" in this proposal includes prevention of deterioration as well as restoration of deteriorated library materials. It shall include conservation of both the physical and intellectural contents of materials.

[5] Haas, Warren J. Preparation of detailed specifications for a national system for the preservation of library materials. Final Report. Washington, D.C., Association of Research Libraries, 1972, (ED 060 906) p. 24.

The preservation program demands, and cannot effectively exist without, a vigorous acquisitions policy. This policy requires the careful selection of materials that are permanent and durable. The Committee on Permanence and Durability of Paper of the Technical Association of the Pulp and Paper Industry has defined paper permanence as "the degree to which paper resists chemical action which may result from impurities in the paper itself or agents from the surrounding air; durability is the degree to which a paper retains its original qualities under continual usage."[6]

Despite knowledge about the need for such paper, much of the currently available material purchased by a library does not meet durable standards. Therefore it is essential that a screening process for acquisitions be established so that materials requiring preservation can be identified. Problem materials which are screened by the Acquisitions Department staff according to written guidelines would then be referred to the appropriate person(s) for a decision on preservation, retention, etc. These materials include items with recordings or loose plates, unusually expensive items, limited editions, materials subject to theft, and materials printed on newsprint or other wood pulp papers.

Screening is also necessary for materials already in the collection to determine what type of preservation treatment is needed. All

[6] Henderson, James W. Memorandum on conservation of the collections. New York Public Library, May 1970 (unpublished), p. 2.

types of library materials should be carefully screened, including monographs, serials, microforms, phonograph records, and others, with attention to the special problems and needs of each type.

Initial methods of screening materials already in the collection include:

1. Stack review: scanning shelves to determine scope of problem, as well as finding specific items needing attention;
2. Circulation: reviewing returning materials and noting those in disrepair;
3. Patron and staff reports: problems found during shelf-reading, searching, weeding, etc.;
4. Inventory: noting deteriorating items found during inventory.

As a result of screening, individual written records are made of items needing preservation attention. These records then become a major resource for the conservator.

For maximum efficiency and economy, clear priorities must be established, and each item recorded in the initial screening will be reviewed with specific priorities in mind. First, the relationship of the item to the entire collection is considered with regard to its research and historical importance, its duplication by another copy in better condition, and the commercial availability of a suitable replacement copy. A secondary factor to be considered is the importance of the item as demonstrated by recent circulation and use. However, circulation statistics should be used cautiously. After clear priorities are established and a trained conservator has screened the items, materials which will not be permanently retained would either

be mended and returned to the stacks, stored or discarded after appropriate consultation.

Items to be retained will be screened into categories according to their physical condition and the type of preservation action needed. Depending on the physical condition (type of paper, condition of paper, condition of binding), a decision is made concerning appropriate treatment. The type of treatment needed includes total or partial restoration, stabilization of the paper, rebinding, cleaning, etc.

The primary objective of all treatments is stabilizing or increasing an object's permanence and durability. The treatment of library materials in order to preserve them as artifacts or to preserve their intellectual content is a complex, highly technical subject. Of primary concern is the preservation of books, bindings, documents, manuscripts, maps, broadsides, etc., selected for treatment. These items frequently show deterioration of paper and bindings. Since a major cause of deterioration is internal and external acid attack, deacidification is a first line of defense. The two primary methods of deacidification currently available are aqueous and nonaqueous.[7] Once a paper has been stabilized by deacidification, it often needs reinforcement to increase or restore its original durability. Acceptable reinforcement methods include resizing, mending, laminating, and encapsulating.

[7] Mass deacidification currently is not cost feasible to most libraries. Haas writes at length in his Preparation of detailed specifications for a national system for the preservation of library materials (p. 33) that in view of such limitations both in technology and cost, libraries screen and set aside their unique items to be preserved in the context of a national preservation program.

After stabilization and reinforcement techniques have been applied to the paper, the conservator, in consultation with subject specialists, determines binding requirements. Where normal binding is recommended, materials are processed in standard fashion. It is important for the library to have access to a multi-method binding operation including the cleat, oversew, adhesive, and machine sew-thru-centerfold (STF) methods. To insure high-quality binding, specifications are established for the bookbinder to follow. These specifications include: type and weight of thread to be used, types of adhesives, and variety of binding materials (buckram, tyvek, etc.). In addition, most materials used by the bookbinder should have a pH of 6.5 to 7, and trimming should be kept to a minimum.

In rebinding those volumes on which normal binding cannot be used, e.g., rare or valuable books, fragile volumes, and books in which the binding itself is of special significance, two effective types of binding are restoration binding and conservation binding. A restoration binding is one in which an attempt is made to reproduce the original appearance of the book as nearly as possible, often using the original materials. A conservation binding is one in which a good, sound protective structure is of greatest importance and original appearance is only of secondary importance.

Many items in library collections are not and will not be worth the expensive treatment required to preserve them as artifacts. One reasonable alternative is to microfilm each item. This would be done following existing federal standards involving quality of materials and processing, and would be reported to the National Register of

Microfilm Masters. In some cases microfiche may be chosen, using appropriate quality control. If no other method of preservation is possible, and if the item qualifies under existing copyright law, photocopying may be considered as a method of information retention. This is the least desirable method of conservation, and should be discouraged under normal circumstances.

If the preservation stance of a library is to have lasting significance, then a system of environmental conditioning is mandatory. The condition of the air circulating in a library is important to the preservation of materials. Unfortunately, many conditions conducive to long book life must often be modified for the sake of the library patrons. This is not as true in rare book vaults where the public is excluded and the value of the books warrants ideal book conditions.

The ideal temperature for books taken occasionally to reading rooms is 60 degrees. Below that, there is a tendency for moisture to condense. Above that, paper deteriorates rapidly. This temperature is maintained in rare book vaults. In the main stacks, a year-round temperature of 68-70 degrees is optimal for patron comfort and is feasible for preservation. Fifty percent relative humidity must be maintained throughout the year. This is best for the preservation of books and for circulation departments with IBM sorting operations. To prevent swelling/shrinking of materials, fluctuations in humidity must be kept at a minimum. Particles are filtered from the air through dry intake filters; electrostatic filtering systems are detrimental for

this purpose as they create paper-damaging ozone. Ultraviolet radiation and visible light with wave lengths between 300 and 500 nanometers cause serious photochemical deterioration of paper and binding materials. Fluorescent lighting is strong in just this area of the spectrum, but commercial filters which reduce ultraviolet rays are available in the form of sheets or sheaths to fit over the tubes. None of these filters is permanent, and regular inspections must be made to assure their continued effectiveness. Incandescent lighting is much less damaging.[8]

The proper physical housing of library collections can enhance the survival of materials. Shelving equipment should be selected according to specifications regarding quality, durability and accessibility. Shelving, exhibits, and display cases should meet at least minimum local standards for patron safety, and minimum library standards for book protection. Stack ranges must be securely attached to floor/ceiling. Shelves should be clean, smooth, and free of sharp edges and corners. A nine-inch shelf depth is suitable for most of a library collection, while flat storage space is required for oversize

[8] For further information on environmental control, see:
a) Cunha, George M., and Cunha, Dorothy G. Conservation of library materials; a manual and bibliography on the care, repair, and restoration of library materials. Metuchen, N.J. The Scarecrow Press, Inc., 1971, 2 v.
b) Cunha, George M., and Tucker, Norman Paul. "Control of Light." In (their) Library and Archives Conservation. Boston, Boston Athenaeum, 1972, p. 73-78.
c) Henderson, James W. Memorandum on conservation of the collections. New York Public Library, May, 1970 (unpublished), p. 8.
d) Lape, Philip B. "Physics of Light." In Cunha, George M. and Tucker, N.P., Library and Archives Conservation. Boston, Boston Athenaeum Library, 1972, p. 65-72.

volumes.[9] Special care and equipment are also needed for maps, photographic materials, microforms, recordings and tapes, artifacts, clippings, prints, etc.

Thoughtful placement of books on the shelves can limit damage incurred by unnecessary and improper handling. Use of closed stacks or limited access areas provides maximum protection, but since this is not always feasible or desirable, proper handling is mandatory. Books must be size designated and shelved accordingly. They should not be placed on their fore-edge. Shelves should not be loaded beyond their carrying capacity and, wherever possible, space should be left for future expansion. This will prevent jamming and excessive shifting.

Since it is often necessary to move books within a library, either on a small or large scale, it is important that proper procedures must be followed to prevent damage to the materials. Special equipment necessary for the flow of books within the library--book drops, trucks, conveyor systems, packaging materials, etc.--should meet specifications established by the conservation office and should be used in a responsible manner by trained personnel.

Fundamental to a balanced preservation program is the office of the conservator. Since many aspects of preservation are interdepartmental and affect all sections of the library, this office coordinates

[9] The New York Public Library Memorandum gives detailed standards for shelving, emphasizing also the need for systematic cleaning, inspection, and instruction (p. 8-10).

both general activities and special projects. The conservator has the necessary authority to establish priorities and procedures and to guide decision-making and decision implementation. He or she is responsible for keeping informed of new developments, educating and training staff and patrons, planning for emergencies, and recommending preventive environmental conditions and procedures for the entire library system. Qualifications of the assembled conservation staff include:

- training, experience, and skill in book and paper restoration, binding, and photography;
- a background in sciences and their technological applications;
- demonstrated knowledge and appreciation for the function and purpose of libraries and the special nature of library materials;
- a background in the history and aesthetics of books; and
- administrative ability.

A conservation staff meeting these qualifications may be composed in various ways.[10]

Further library support of the conservation office will be evidenced by the existence of the Preservation Committee as a full standing committee. This committee will have members from different departments, including both technical and professional staff. In the absence of a conservation office, the Committee can work to formulate

10 A more detailed outline can be found in the "Discussion" by Paul Banks following James W. Henderson and Robert G. Krupp's "The librarian as conservator," in The Library Quarterly, v. 40 (1970), p. 135-194.

a general preservation policy statement and through its various activities encourage the support and conditions needed for the establishment of a preservation unit. It can study the library system, assess its physical facilities, and recommend areas for improvement or change. It can also inform staff and clientele of preservation developments.

The preservation office, with the Preservation Committee, is responsible for an education program for new staff members, required as part of orientation to the library. This should include information about practices which are harmful to the preservation of materials as well as key signs or danger signals to recognize when books are in need of help. Through these channels, emergency procedures are enacted and staff informed of steps to be taken and persons to be contacted in the event of floods, fires, and other disasters.

In addition, slide programs and taped discussions would be available to library users, covering topics such as proper removal of material from shelves, opening new volumes, energy conservation and management, the effects of heat and sunlight on paper, etc. Signs and other visual aids may be used to remind patrons of practices harmful to books. Protective coverings should be made available during inclement weather.

To further publicize preservation, discussions may be held and articles published about preservation activities. Workshops would

be held as needed to ensure awareness of developments and improvements in the field, and information gained through the programs of other libraries would be shared. Preservation information, including lists of experts, supplies, and facilities available during emergencies, would be disseminated as widely as possible.

BIBLIOGRAPHY

Barrow, W. J. Research Laboratory. Permanence/Durability of the Book. Richmond, Va., 1963-74, 7 v.

Cunha, George M., and Dorothy G. Conservation of Library Materials; a Manual and Bibliography on the Care, Repair, and Restoration of Library Materials. Metuchen, N.J., The Scarecrow Press, 1971, 2 v.

Cunha, George M., and Tucker, Norman Paul. Library and Archives Conservation. Boston, Boston Athenaeum, 1972, 255 p.

Haas, Warren J. Preparation of Detailed Specifications for a National System for the Preservation of Library Materials. Final Report. Washington, D.C., Association of Research Libraries, 1972, 34 p. (ED 060 908).

Henderson, James W. Memorandum on Conservation of the Collections. N.Y., The New York Public Library, May, 1970 (unpub.), 28 p.

Henderson, James W., and Krupp, Robert G. "The Librarian as Conservator." In The Library Quarterly, v. 40 (1970), p. 176-191.

Metcalf, Keyes D. Planning Academic and Research Library Buildings. New York, McGraw-Hill, 1965, 431 p.

Poole, Frazer. "Thoughts on the Conservation of Library Materials." Library and Archives. Boston, Boston Athenaeum, 1972. p. 19.

Shelley, Karen Lee. "The Future of Conservation in Research Libraries." In Journal of Academic Librarianship, v. 1, no. 6 (Jan., 1976), p. 15-18.

Smith, Richard D. The Non-aqueous Deacidification of Paper and Books. Chicago, Univ. of Chicago School of Library Science, 1971 (Thesis).

RESPONSE FROM UCLA TO QUESTIONNAIRE FROM THE TASK FORCE ON PRESERVATION OF LIBRARY MATERIALS

The Task Group on Preservation of Library Materials is gathering information on current, planned, or hoped-for practices of library conservation and preservation throughout the UC library system. For purposes of this questionnaire we are not making firm distinctions between mending and restoration (preservation activities) and routine housekeeping activities such as cleaning of books and shelves, air filtration, temperature and humidity control, plans for emergencies (conservation activities) because it is likely that no firm distinctions have been made between such activities. Please feel free to respond extemporaneously to these questions. If there are questions not asked that you feel should have been asked, please indicate them and respond to your own questions.

1. Are there any current library preservation or conservation activities on your campus? If so, please describe:

Binding of unbound material. Rebinding and mending damaged volumes. Replacing worn and damaged material with hard copy or microform. Use of acid-free paper in document boxes and to store photographs, maps, etc. Special photographic conservation program funded by NEA. Mylar lamination of rare maps. Smoke and water sensor alarms in all libraries. Temperature control in all libraries, humidity control also in Department of Special Collections and computer room of Systems Department. Special lights with low ultra-violet content in Department of Special Collections. Fumigation of infested materials. Appointment of special committee to devise procedures for protecting staff and collections in the event of emergencies.

2. Has your library a written conservation program? If yes, may we receive a copy?

No.

PRESERVATION PROGRAMS
Univ. of California/ L. A.
4 pp.

3. Which library department administers or directs preservation or conservation activities? Which departments perform preservation/conservation activities?

No one department directs all preservation and conservation activities. Bindery Preparation units in our Biomedical, Law, Physical Science and Technology and University Research Libraries prepare books to be sent to the University Bindery, and the unit in the University Research Library performs minor repairs. Acquisition units in the same libraries order replacements of damaged materials in hard copy or microfilm. The William Andrews Clark Library and the Department of Special Collections send rare materials to the Grolier Bindery for restoration and hand binding. The Building and Facilities Coordinator is responsible for the physical condition of the spaces which house the various libraries which make up the UCLA Library System.

4. Have environmental standards been established and maintained for housing the library collection?

Standards have been established for the ideal temperature and humidity for the collection, but we are only able to maintain these standards in our Department of Special Collections.

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5. Is the library environment monitored by a campus agency or group within the library for purposes of preventive maintenance? (e.g., humidity, temperature, leaky water pipes)

The Library's Building and Facilities Coordinator makes daily checks of the temperatures and humidity in the University Research Library and periodic checks in other library units, as well as periodic checks for leaky pipes, mildew, insect infestation, etc.

6. What housekeeping procedures are currently being performed to ensure conservation of library materials? Please indicate the frequency and extent of these activities.

All libraries are swept and dusted daily, with polishing and window cleaning, changing of air filters, etc. being done intermittently.

7. Is there any special equipment or facility within your library set up to perform conservation/preservation procedures? If yes, describe. Do you know of any special equipment or facility on your campus or in your area which can support library conservation activities? If yes, do you utilize those facilities?

Within the Library, our Bindery Preparation units, Clark Library, and Department of Special Collections prepare volumes for binding and rebinding. On campus, the Physical Plant Department fumigates infested materials, and laboratories in the Chemistry and Biology Departments check materials for acid content or the presence of foreign matter, upon request. In the area, the University Bindery binds our books and serials, and the McDonnell Douglas plant in Huntington Beach has extensive vacuum drying facilities.

8. Who, in your library, is trained to evaluate conservation/preservation needs? Is his/her knowledge utilized by the library administration? If yes, how?

Several staff members have special expertise which is brought to bear on the evaluation of conservation/preservation needs: Hilda Bohem, in the Department of Special Collections, has attended several seminars on preservation and has put her knowledge to use in several ways: in connection with a flood we had in 1975, in directing a conservation program for our photographic materials, and in service on your committee.

Don Buck, our Building and Facilities Coordinator, has had considerable experience in building and equipment maintenance, and puts his knowledge to use every day in solving maintenance problems.

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9. Do you have a storage area for brittle books removed from circulation? If yes, how many are there in number? Where are they located?

Brittle books are removed from circulation only temporarily, until a decision is made as to what to do with them (replace in hard copy or microform, discard, return to stacks, place in Noncirculating Reading Center.)

10. Do you have a special microcopying program to replace rare or brittle materials? If yes, are the brittle items discarded after such replacement?

Microcopying is one way we handle brittle materials. (See answer to question 9.) Brittle items are normally discarded after microcopying.

11. Is there a formal system for bringing damaged library materials to the notice of those responsible for assessment of damage and repair? How are patron and staff recommendations concerning damaged books acted upon?

Damaged materials, together with lost items, which are identified by patrons and staff are referred to selectors for decisions as to whether they should be [illegible] replaced (in hard copy or microform), discarded, returned to the stacks, or placed in the Noncirculating Reading Center. This effort is coordinated for the University Research Library collection by the Replacements Assistant in the Acquisitions Section of the Technical Services Department.

12. Is there a separate preservation budget for replacement of damaged library materials? If yes, what percent is spent on hard copy, what percent on microforms?

There is a replacement fund of approximately $36,000 for lost and damaged materials but we do not have figures as to what percentages are spent for damaged vs. lost materials or for hard copy vs. microform. There is also a Library Microfilm fund of $7,000, which is used primarily to purchase back runs of newspapers and special commercial microfilming projects, e.g. University Microfilm's Early British Periodicals. This year we have also budgeted $10,000 to purchase serial back runs and serial subscriptions in lieu of binding.

13. What percent of the book budget is spent on reprints, microforms and out-of-print books to replace holdings which have been damaged? Distinguish between monographs and serial replacements.

This figure is not available. See answer to question 12.

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14. What amount of funding is currently allotted to conservation/preservation of library materials? How much of this is reserved for special collections? How much for the general collection?

The total amount would include the total binding budget of $379,000 plus the $10,000 for serial back runs and subscriptions and an indeterminable percentage of the Library Microfilm and Replacement funds. Of this total, $25,000 for special binding can be said to be reserved for special collections.

15. What problems, in the library, do you envision if conservation/preservation of the collection are not dealt with?

Invaluable and irreplaceable materials, as well as standard teaching and research materials, will deteriorate to a point whether they will be lost as useful research and teaching aids.

16. Additional comments.

We applaud the committee's efforts to gather information on this vital matter and we hope that it will be able to generate interest in and support for the programs which need to be undertaken or augmented.

Norman Dudley
Assistant University Librarian
(Collection Development)
UCLA

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11/76

LIBRARY OF CONGRESS

OFFICE OF THE ASSISTANT DIRECTOR FOR PRESERVATION

A NATIONAL PRESERVATION PROGRAM FOR LIBRARIES

NATIONAL PRESERVATION PROGRAM
Library of Congress
7 pp.

I. INTRODUCTION

Preservation problems in libraries divide themselves into three general categories with a moderate degree of overlapping in the three areas. For all practical purposes, major preservation problems may be classified as follows:

...the preservation of materials published since about 1800, and now reaching advanced stages of embrittlement and deterioration.

...the preservation of older materials ranging from the earliest printed books in the library collections to approximately the beginning of the nineteenth century.

...the preservation of library materials of the future.

Within each of the above categories, there are numerous and varied formats of materials published on paper, as well as an increasingly large variety of materials published or preserved in such other forms as microfilm, motion picture film, slides, video tapes, phonograph discs, and others. Although a comprehensive National Preservation Program cannot ignore the newer forms in which knowledge is published and disseminated, the present proposal is focused largely on paper documents in their many formats.

II. THE PROBLEMS

We can elaborate on the above as follows:

A. Library materials published since about 1800, present the biggest preservation problem with which American libraries must contend. These are the materials which, for the most part, are not rare enough or intrinsically valuable enough to justify restoration in the original format, but are of sufficient value to justify preservation of the

intellectual content. In the Library of Congress alone it is estimated conservatively that some six million such volumes are so brittle they cannot be given to a user without significant risk of damage. In the New York Public Library it is estimated that more than half of the collection has reached such an advanced stage of embrittlement. While similar figures for other libraries are not available, it appears certain that the percentages of materials in research library collections are sufficiently high to pose major problems for the custodial institutions.

At the present date, there is no fully tested, feasible method for the mass treatment of such materials. Even if such a process did exist it would probably benefit no more than 65% of the brittle books in library collections, since deacidification does not restore strength to paper already embrittled. For all such brittle volumes there appears to be only two feasible preservation procedures: 1) low temperature storage, and, 2) microfilming to preserve the intellectual content.

B. Materials in library collections printed before about 1800 are, for the most part, in better condition than the more recent materials described above, although there are many exceptions, especially among materials published toward the end of this period. In most cases, the paper in books dating from the 14th, 15th, and 16th centuries is in good to excellent condition. In these instances, the problems are generally the result of wear and tear through the years, combined with vandalism, accidental damage, and insect or mold damage.

The major approach to the conservation of these older materials must be that of providing suitable preservation, repair, or restoration treatment where the value of the item justifies the cost. Because every such artifact or document presents a wide range of different problems dependent upon many factors, including the age and value of the book, the type of binding, the condition and type of paper, the nature of the ink, and the vicissitudes to which the volume or other item has been subjected during its lifetime, only a trained conservator is capable of dealing with them.

C. Materials published today, as well as those to be published in the foreseeable future are being printed on paper which is no better than the book paper of the past century. In many cases such paper is worse than that with which librarians contend today. Unless effective action is taken soon the preservation problems of the next hundred years will be more serious than those of the present.

III. A SUGGESTED NATIONAL PRESERVATION PROGRAM

A. Preserving the intellectual content of materials published since about 1800.

Of the millions of embrittled and deteriorating volumes on the shelves of the nation's libraries, only a relative few have such intrinsic value as to justify the cost of restoration. The intellectual content of the majority of such volumes is important, however.

As indicated above, two methods are available for preserving the intellectual content of these books.

1. ...storage at low temperature in warehouse-type structures or in underground caves where optimum temperature and humidity can be maintained. Without question, such storage offers the most economical and feasible method of preserving these materials for indefinite periods of time. It should be remembered, in this connection, that paper scientists generally agree that for every 10 degrees F. the storage temperature can be reduced, the life of the paper can be approximately doubled.

2. ...microfilming to preserve the intellectual content at a significantly lower cost than the cost of restoration in the original format. At the Library of Congress, for example, it costs approximately 24 dollars to microfilm the average three hundred page volume. To properly treat the same volumes and restore it in its original format costs 10 to 15 times as much.

At the same time, microfilming is more expensive than low temperature storage. There is, moreover, the question of the life expectancy of microfilm. A carefully processed silver-halide negative microfilm appears to have excellent prospects for archival permanence, but the fact remains that our experience with microfilm is limited to some fifty years or less while our experience with paper goes back nearly 2,000 years.

Ideally, then, the solution to the problem of preserving brittle and deteriorating books would be to provide low temperature storage for all such materials. From the practical point of view, however, and in terms of preserving library collections nationwide, the assemblage of the brittle materials now stored in the nation's research libraries in one

location (or in a limited number of locations) poses a major problem. In fact, the original proposal for a national program to preserve brittle and deteriorating books proved untenable, in part at least, because no library was willing to surrender its materials to a national collection.

For this reason, the Library of Congress believes that a National Preservation Program, initially at least, should emphasize microfilming the brittle materials published during the last century, with storage of the master microfilm negatives under ideal environmental conditions. However, we also propose that low temperature storage facilities be provided for books. In time, it is likely that a significant number of deteriorated materials would be assigned to a National Preservation Collection by the libraries holding such.

Although it is perhaps premature to discuss the location of a National Preservation Collection it can be noted that physical security in the event of war should be given consideration. Thus a surface structure near any major metropolitan area would have much less to recommend it than would an underground facility where stored materials would have both an ideal environmental and physical security.

A national preservation project designed to preserve by microfilming, the intellectual content of those deteriorating materials which do not warrant more expensive treatment should include the following elements:

1. ...the conduct of surveys of the major research libraries of the United States to determine those classes of materials most in need of preservation and the development of priorities for microfilming such materials.

2. ...the development of standards (both bibliographic and technical) for microfilming those materials to be included in the national program.

3. ...the establishment of a national preservation microfilming center dedicated solely to microfilming deteriorating materials, equipped with special cameras designed for filming rare materials, and staffed with personnel trained in the techniques of handling fragile materials. In addition, this center should contain specially designed vaults for the archival storage of the master negatives of national preservation microfilms.

4. ...the establishment of effective bibliographic control procedures for microfilmed materials through a national network and clearing house to: 1) receive reports of all materials microfilmed under the national conservation program and 2) to publish such information on a regular and timely basis.

5. ...the establishment of a procedure under which participating research libraries would contribute master microfilm negatives (i.e., those which meet national microfilming standards) to the center.

B. Preserving those materials in library collections which justify preservation, repair, or restoration in the original format.

1. Training Program for Conservators

Without question the single most pressing and unsolved problem in the conservation of library and archival materials is the almost total lack of personnel capable of providing the expertise needed for the conservation treatment of the hundreds of thousands of items which justify preservation in their original format. If a national preservation program did nothing other than to establish a sound training program for conservators of library materials, it would repay all the time, money, and effort involved.

The training program proposed here would utilize the academic program and degree granting facilities of a local university. Students in the conservation program would receive special courses in conservation chemistry, the history and technology of paper, administration of conservation programs, as well as at-the-bench training in the LC laboratory and workshops. Graduates holding bachelor's degrees with majors in the conservation of library and archival materials could enter the field or could go on to take a master's degree in conservation.

2. Regional centers for the conservation of library and archival materials.

Each year the Preservation Office receives hundreds of letters and phone calls asking for advice and assistance on conservation problems. Inevitably, the next question is where can I have this work done. Unfortunately, there are few private conservators capable of handling the wide ranging preservation problems typical of

most large library collections. One of the most effective and productive national conservation programs the Library of Congress could undertake would be the establishment of one or more regional conservation centers. In fact several university libraries have already requested L.C. to establish such centers at their institutions.

Such a center (or centers) established on a regional basis on university campuses, staffed by graduates of a cooperative training program in conservation, and supervised by the Library of Congress, could undoubtedly become self-supporting in two to four years. The returns, in terms of improving library conservation practices and conserving the nation's collections, would be enormous.

3. National workshops in conservation

It will require several years to establish a sound conservation training program and for the graduates of this program to gain the experience needed for them to staff the proposed regional centers. In the interim, the Library proposes a series of conservation workshops designed to educate librarians in the fundamental principles of conservation. Such workshops should be conducted on a regional basis.

4. Training aids

Despite a lack of professional training, librarians increasingly find themselves assigned duties related to conservation. In such cases a series of carefully planned training films or videotapes designed to present certain fundamental preservation concepts and techniques would prove invaluable. Such films would have equal or greater value for workshops and seminars conducted by the Preservation Office. (See 3 above.)

5. Emergency salvage teams

Increasingly, the conservation staff of the Library of Congress is called upon to provide its acknowledged expertise in the salvage of materials damaged by fire and water. Within hours after the Federal Records Center in St. Louis experienced a disastrous fire in 1974, L.C. had been requested to provide the assistance of its conservation staff. More recently at the request of the Geological Survey, a member of the staff of the Preservation Research Office went to Denver to assist in the salvage of the Survey's library and aerial photograph collections which were badly damaged in a weekend fire in the Federal Center. The Preservation Office advises, usually by telephone, on several such catastrophes every month. It would be a significant service to government agencies, libraries, and archives if

the Library could provide a specially trained team of one or two persons who could be available at any time to assist in such emergencies anywhere in the United States.

C. Preserving library materials of the future

1. The preservation of future publications is as essential for scholarship as is the preservation of materials previously published. Fortunately, a viable solution to this problem appears to be simpler and less costly than the preservation of materials previously published. An effective program for the preservation of future publications should encompass the following:

a. ...amendment of the Copyright Law to provide for the submission of three copies, the third copy to become part of the national preservation collection.

b. ...provision of low-temperature facilities to assure the archival storage of the materials in this collection.

c. ...establishment of a suitable record keeping facility to record the materials taken into the collections and to disseminate such information when necessary.

d. ...establishment of facilities for microfilming these materials when library copies become too deteriorated for use.

2. Improvement of book paper

In 1.a. above, it was proposed that one copy of all copyrighted materials published in the future be stored under ideal environmental conditions, thus creating a national preservation collection of materials in original format. As a corollary to that project a national program should make every effort to persuade paper-makers to produce better, stronger, long-lived paper.

C. Funding

A program of the magnitude proposed here could, in five to ten years time, make a significant and measurable impact on the preservation problems of American libraries, but such a program requires substantial funding and wide ranging authority to attack the problem simultaneously on several fronts. If, as has been suggested, there are foundations willing to fund a sound program to preserve the national heritage in the nation's libraries, there is no better time to initiate such a program than the present.

EXPECTATIONS FOR THE NATIONAL PRESERVATION PROGRAM
University of California at Berkeley

(F) Our expectations would include the following:

1. A continuing source of technological expertise.
2. Identification of priorities for preservation, both as to types of materials (or categories), and specific titles.
3. Some kind of 'realistic' program fro funding preservation efforts on a continuing basis.
4. Attempts to find methods of alleviating the task of preservation in the future.
5. Assistance to information repositories in coping with disaster, both before and after such occurrences.
6. Coordination of preservation responsibilities to avoid duplication of expensive efforts.
7. Sponsorship of educational programs for conservators.
8. Program is needed NOW.
9. Establish standards for personnel involved in conservation programs.
10. Establish standards for building and housing requirements for books and other library materials.

NATIONAL PRESERVATION PROGRAM
Univ. of California/Berkeley
1 p.

2-year contract
1976-78

STATE OF CONNECTICUT

LIBRARY BINDING SPECIFICATIONS

BINDING SPECIFICATIONS
University of Connecticut
17 pp.

TERMS AND CONDITIONS

1. These specifications apply to books, pamphlets and serials to be bound for the State of Connecticut, and are to be followed by the Binder unless the binding ticket, or other written instructions from the Librarian, directs otherwise.

2. Prices quoted shall be net, including all pick-up and delivery charges fully paid by the Contractor. No additional charges will be allowed for packing or containers.

3. Materials and services furnished to the State are not subject to either Federal Excise Tax, Federal Transportation Tax, or Connecticut Sales Tax. Exemption Certificates will be furnished on request.

4. The Binder shall establish his qualifications for performing binding as specified by either

a. Submitting evidence that his work has been certified as Class A by the Joint Committee of the American Library Association and the Library Binding Institute: or

b. Submitting:
(1) Samples of work for examination by the State,
(2) The names of two Libraries for which he has done binding, and
(3) A statement of plant equipment owned and operated by the Binder, his working force, and his ability to give satisfactory service and a high grade of workmanship.
(4) Square footage of working area.

5. The Binder shall permit his plant to be inspected from time to time by a State of Connecticut representative during work hours of the plant to determine whether the Binder is fulfilling the terms of the binding contract.

6. a. Lettering of magazines should conform to the "Standard Lettering for Bound Magazines" from current C.L.A. report.

b. In the case of serials and sets previously bound, the Binder shall make and maintain, at his expense, sample backs, rub-offs, or other records by which uniformity in the binding of sets may be maintained for serials not bound according to 6.a.

7. All materials to be bound shall be returned within 28 calendar days after notification to the Binder that material is ready for pick-up. The Contractor must agree to a liquidated damages charge of fifty cents (50¢) per week or any part thereof for each volume which is overdue. Material designated as "rush" shall be bound and returned in 14 calendar days after notification to the Binder that material is ready for pick-up. Be it further understood and agreed that failure to deliver as required or faulty workmanship, the State of Connecticut shall have the right to terminate this Contract. Said Contractor shall be liable for any excess costs necessary to complete this Contract.

TERMS AND CONDITIONS -

8. The Contractor shall insure, at his expense, all books and other library materials, against loss or damage, from any cause, from the time they leave the library until they are returned. Each binding shipment is to be insured in the amount specified by the State of Connecticut, but not for less than $10,000. As proof of compliance with this requirement, the successful Bidder shall furnish a certificate of insurance to the State. Rare or valuable items, while at the bindery and when not being worked on, shall be kept in a fireproof vault or safe. Books and other library materials lost or damaged while at the bindery or in transit must either be replaced by the Binder, or the Binder must reimburse the Library for their total replacement cost.

9. Any binding errors made by the Binder shall be corrected by the Binder without additional charge and returned within fifteen (15) days after notification of error. Any extra transportation costs resulting from such errors shall be paid by the Binder.

10. Binding Slips, pre-printed addressed labels and shipping cartons shall be provided upon request by Contractor at no additional charge.

11. All delivered bound volumes, magazines, newspapers, paper-back books, etc., are subject to the requirements of Form SP-7A (Rev. 1962) standard Bid and Contract Terms and Conditions.

12. EXTENSION CLAUSE: The State reserves the right to renew this Contract for additional periods, with the consent of the Contractor.

SPECIAL NOTE: If it is in the best interest of the State of Connecticut, this Contract may be awarded to more than one (1) vendor.

Weight of cartons not to exceed 50 lbs.

Babbidge Library
University of Connecticut
Storrs, Connecticut USA 06268

MINIMUM SPECIFICATIONS FOR LIBRARY BINDING

PART 1. CLASSIFICATION OF VOLUMES

SPECIAL NOTE: The purpose of these specifications is to establish standard methods, materials, and workmanship for the rebinding for library or storage use, of new or old books, periodicals, newspapers, music scores and special volumes.

For the purpose of these specifications, the different types of volumes are defined as follows:

Ordinary book-volume. Any ordinary-sized graphic material consisting of an appreciable number of leaves or folded sheets produced originally as a unit and submitted for binding or rebinding as such a unit and not requiring special handling. (An ordinary book-volume ranges in height from about 6 inches to 18 inches, with width in proportion, and thickness not exceeding 2 inches.)

Ordinary magazine-volume. A series of multi-leaved, like-constituted, serially-numbered graphic unit submitted for binding or rebinding into a scheduled multi-unit volume and not requiring special handling. (An ordinary magazine-volume ranges in height from about 7 inches to 18 inches, with width in proportion and thickness not exceeding 3 inches.)

Ordinary newspaper-volume. A series of newspaper-issues arranged for binding into a composite unit bulking not more than 2 inches, and not requiring special handling.

Special volume. Any undersized, oversized, or odd sized volume or any volume that requires special handling, in any of the three classifications. The binder shall arrange specifically with the library as to the nature of the special work to be done or shall exercise his best technical judgement as to the requirements of a particular special volume (for instance, a special book-volume, because of size or technical nature, may equal or even exceed a magazine volume in difficulty of handling and therefore in the value of the work. Similarly a special magazine-volume may require more work, at a higher value, than a newspaper volume.) These specifications do not attempt to cover all kinds of special work; but the approved methods of handling the most frequent kinds are specified, including music scores and storage binding.

PART II REBINDING BOOKS

1. Collating and Mending

   a. All books shall be carefully collated before being taken apart to detect any missing or damaged leaves or any peculiarities of paper or construction that might make rebinding inadvisable.

   b. All tears through print shall be mended with Japanese tissue or onionskin bond, and all tears in margins with bond paper of suitable weight.

   c. Photo-copy pages of missing material furnished for binding will be bound at no additional cost.

2. Preparation for Sewing

   a. All double leaves, maps or inserts shall be set out with strips of bond paper or equal.

   b. Books unsuited for oversewing shall be prepared and reinforced for sewing through their folded sections, unless they are to be stitched.

3. Removing Backs

   For books that are to be sewn, folds on the back shall be sanded off or milled off, or removed by taking a very narrow trim, not more than 1/16 inch, so as to leave all back margin possible. Where margins do not allow for sanding or milling, the original sections are to be used.

4. Dividing into Sections

   a. Books that are to be oversewed, shall be divided into uniform sections, each section not to exceed .055 inch in thickness, except flexible pulpy paper which may be in thicker sections not to exceed .065 inch each.

   b. All sections of books in which paper is moderately stiff shall be scored before sewing. (Extra stiff paper unless hinged shall not be oversewed: usually these may be sewed through their folded sections after necessary reinforcement of folds.)

5. End Papers

   a. All end papers shall consist of three functional parts: a pasted-down or outward end-leaf which becomes the cover lining; at least two free fly-leaves and reinforcing fabric.

   b. The following three types of end papers shall be permissible: Type X. Three-leaf; single reinforcement; invisible joint; with the inward fly-leaf not pasted to the middle leaf.
   Type Y. Three-leaf; single reinforcement; visible joint; with inward fly-leaf not pasted to the middle leaf.
   Type Z. Four-leaf; double reinforcement; visible joint; with the two middle leaves pasted together forming a single leaf.

   c. The construction of end papers shall be such that the sewing will go through the reinforcing fabric the same as through the sections of the book.

6. Sewing

   a. Most books having proper inner margins and suitable paper shall be sewed with thread by oversewing method, either by machine, or by hand, or cleatsewing (method to be specified by the using Agency). If sewn by machine all sections shall be pasted. No sewing shall extend more than 3/16 inch in from the back edge of the volume, and no nearer to the head and tail than 1/4 inch after trimming.

6. Sewing (continued)

b. Exceptional books such as little folks picture books, music, certain art books, and some reference books, shall be sewed through their folded sections. When such sewing is used, weak folds of sections shall be reinforced with strips of bond paper, and the sewing shall be done on three or more tapes or cords, with linen thread, usually one-on.

c. "Books less than 1/2 inch in thickness may be sewed side stitched by machine, or by hand, provided that moderately stiff-paper books sewed in this way shall have each section scored before sewing; that the stitches shall be approximately 1/2 inch apart and come to within approximately 3/4 inch but not closer than 1/2 inch to the top and bottom of the book; and that the sewing shall not extend more than 5/32 inch in from the back edge of the volume. Also provided that if sewed by machine, no hole shall be made between the sewing and the top and bottom of the book, and that approximately 1/2 inch of the thread shall be left on each side at the beginning and end of the sewing, and that these thread extensions shall be securely pasted down and locked between the reinforcing fabric."

d. Books which are sewn-through-the fold, where sewing has not deteriorated, except at endleaf sections, and which will withstand a rebacking operation, should be done using a "Non-Resewn" method.
An end-leaf is tipped-on (3 piece end leaf or white flexible cloth) to both front and rear of the volume after the old covers and end-leaves have been removed, and also the old glue and lining material. Holes are punched or drilled at a 45 degree angle to the pages. Distance between holes should be 1-1/4 inch to 1-3/4 inch. With needle and thread, and by hand, the end-leaves are sewn to the volume by going through holes twice. (From first hole to last and back.)

7. Trimming

All books shall be trimmed as slightly as possible (or left untrimmed if so instructed).

8. Edges

Edges shall be sprinkled, stained, or left plain, as instructed.

9. Gluing, Rounding, Backing, and Lining.

Backs of books shall be glued with approved flexible glue, well rounded and backed, and lined with approved Canton flannel extending to within 1/2 inch of head and tail of books, and well onto each end paper (approximately 1-1/2 inches). (Planatol Cold Emulsion Adhesive, Type BB or Type BB Super, is the recommended polyvinyl resin paste for the cleat sewing process.)

10. Covers

a. Covers shall be made of heavy-weight starch-filled or pyroxylin-filled buckram or drill base pyroxylin-coated material of a quality at least equal to the standards set forth in Part V of these specifications.

b. Covers shall be made over hard-rolled binders board, with uniform squares, in a neat and workmanlike manner. The thickness of the board shall be suited to the size and weight of the book.

c. The cover material shall be turned in enough to insure proper adhesion (normally 5/8 inch is necessary).

PART II REBINDING BOOKS - continued.

11. Inlays

All covers shall have an inlay of flexible paper securely attached to the inside of the backbone of the cover. The paper shall be cut the same length as the cover boards and the approximate width of the back of the book after it has been rounded and backed. The paper shall be of a thickness appropriate to the thickness of the cover boards but not less than 0.012 inch, and no thicker than 0.025 inch.

12. Casing in

Books shall be cased in with glycol, polyvinyl resin or an equal nonwarp paste, and pressed between metal-edged boards until thoroughly dry, or pressed in semi-automatic, automatic, building-in machine which applies pressure to front and back covers of volume as well as applying heat and pressure to joint. Volume should then be stacked front edge to spine for at least 8 hours under weight before shipment.

13. Lettering

a. Lettering shall be done after proper sizing in clear type of a size appropriate to the book, in style and position as instructed, using X.X. 23 carat gold deeply impressed to insure long adhesion to the cover.

b. At the option of the library, approved colored foils or inks may be used; but no gold-colored substitute of any kind may be used without the express approval of the library.

c. Binders shall keep necessary records by which uniformity of sets may be maintained.

14. Protective Lacquering of Backs

Books shall be sprayed or treated with a protective material evenly applied over their lettered backs, if required.

15. Inspection

All books shall be carefully opened out and critically inspected for defects in binding or errors in lettering.

PART III BINDING MAGAZINES

1. Collating and Mending

a. All issues shall be carefully examined to detect any damage or any peculiarities of paper or construction in order to determine the most suitable method of binding or the necessity for special handling.

b. All issues shall be carefully checked and collated for proper sequence, pagination, title-page, index, inserts, and supplements. Incompleteness or defects shall be reported.

c. Inclusion or omission of covers, advertising, and similar material shall be handled in accordance with instructions.

PART III BINDING MAGAZINES - continued.

1. Collating and Mending

   d. Foreign language and technical magazines shall be given such special checking and collating as may be necessitated by the nature of the contents.

   e. All tears through print shall be mended with Japanese tissue or onionskin bond and all tears in margins with bond paper of suitable weight.

   f. Photo-copy pages of missing material furnished for binding will be bound at no additional cost.

2. Preparation for Sewing

   a. All double leaves, inserts, and folded sheets shall be set out with strips of bond paper.

   b. Volumes unsuited for oversewing shall be prepared and reinforced for sewing through their folded sections.

3. Removing Backs

   a. For magazines that are to be sewn, folds on the back shall be sanded off or milled off removed by taking a very narrow trim, not more than 1/16 inch, so as to leave all back margin possible. Where margins do not allow for sanding, or milling, the original sections are to be used.

   b. Magazines that come wire-stitched in bulky "saddle" style, and which have excessively narrow margins, shall be prepared for oversewing by being slit with a knife by hand (instead of being sanded or cut off).

4. Dividing into Sections

   a. Magazines that are to be oversewed shall be divided into uniform sections, each section not to exceed .055 inch in thickness, except flexible pulpy paper which may be in thicker sections not to exceed .065 inch each.

   b. All sections of magazines in which paper is moderately stiff shall be scored before oversewing. (Extra stiff papers unless hinged shall not be oversewed, but may be sewed through folded sections after necessary reinforcement of folds.)

5. End Papers

   a. End papers for ordinary magazine-volumes shall be of the types and construction permissible for books, as specified in Part II, Section 5.

   b. End papers for heavy, bulky or large magazine-volumes shall receive special reinforcement in accordance with their special needs. Materials like those specified for newspaper-volumes shall be used whenever necessary.

6. Sewing

   a. Most magazines having proper inner margins and suitable paper shall be sewed with thread by oversewing mehod, either by machine or by hand, or cleatsewing, (method to be specified by the using Agency). If sewed by machine, all sections shall be pasted. No over-sewing shall extend more than 3/16 inch in from the back edge of the volume and no nearer head and tail than 1/4 inch after trimming.

6. Sewing

b. Because of narrow margins, or for flat opening, exceptional magazines shall be sewed through the folded sections. When such sewing is used, all weak folds shall be reinforced with strips of bond paper, loose leaves hinged in, and the sections sewed on four tapes or cords (or more, according to height of volume), with linen thread, usually one-on.

c. Special arrangements, whenever necessary, shall be made with the library as to the sewing or other handling of magazines which are originally bound by the spiral, plastic or similar methods.

7. Trimming

All magazine volumes shall be trimmed to sample, or recorded size, where ... instructed; otherwise as slightly as possible.

8. Edges

Edges shall be sprinkled, stained or left plain, as instructed.

9. Gluing- - - - - -Rounding, Backing and Lining

a. Backs of magazines shall be glued with approved flexible glue, well rounded and backed, and lined with approved Canton flannel extending to within 1/2 inch of head and tail of volume, and well onto each end paper (approximately 1-1/2 inches.) (Planatol Cold Emulsion Adhesive, Type BB or Type BB Super, is the recommended polyvinyl resin paste for the cleat sewing process.)

b. Heavy and large volumes shall be reinforced with tough back-lining paper upon the fabric lining.

10. Covers

a. Covers shall be made of heavy-weight starch-filled or pyroxylin-filled buckram or sateen-base pyroxylin-coated material of a quality at least equal to the standards set forth in Part V of these specifications.

b. Covers shall be made over hard-rolled binders board, with uniform squares, in a neat and workmanlike manner. The thickness of the board shall be suited to the size and weight of the volume.

c. The cover material shall be turned in enough to insure adhesion (normally 5/8 inch is necessary).

11. Inlays

All covers shall have an inlay of flexible paper securely attached to the inside of the backbone of the cover. The paper shall be cut the same length as the cover boards and the approximate width of the back of the magazine after it has been rounded and backed. The paper shall be of a thickness appropriate to the thickness of the cover boards but not less than 0.012 inch and not more than 0.030 inch.

12. Casing in

Magazines shall be cased in with glycol, polyvinyl resin or an equal nonwarp paste, and pressed between metal-edged boards until thoroughly dry, or pressed in semi-automatic, automatic, building-in machine which applies pressure to front and back covers of volume as well as applying heat and pressure to joint. Volume should then be stacked front edge to spine for at least 8 hours under weight before shipment.

PART III BINDING MAGAZINES - continued.

13. Lettering

a. Lettering shall be done after proper sizing in a clear type of a size appropriate to the magazine in style and position as instructed, using X.X. 23 carat gold deeply impressed to insure long adhesion to the cover.

b. At the option of the library, approved colored foils or inks may be used; but no gold-colored substitute of any kind may be used without the express approval of the library.

c. Binders shall keep necessary records by which uniformity of sets may be maintained.

d. Lettering of magazines should conform to "Standard Lettering for Bound Magazines" from current C.L.A. report.

14. Protective Lacquering of Backs

Magazine volumes shall be sprayed or treated with a protective material evenly applied over their lettered backs, if required.

15. Inspection

All magazine volumes shall be carefully opened out and critically inspected for defects in binding or errors in lettering.

PART IV NEWSPAPERS

General Conditions

These specifications include the various methods of binding newspapers which produce a result satisfactory enough to be considered a minimum standard of good construction, workmanship, and materials. Some libraries have in the past had newspaper volumes bound by methods or with materials different in some respect which may not be recommended for general use. In such cases, where the matching of sets is to be continued, these specifications may be used with instructions covering the points of difference. If there are no such specific changes, the binder is to deliver a volume bound in conformity with these specifications in every respect.

These specifications are based on the following assumptions: (1) The library will furnish the binder with the proper editions, complete with all sections. (2) Fresh (unused) copies will be provided by the library wherever possible. (3) Where used copies are provided, specific arrangements, based on estimates whenever possible, should be made as to the amount of mending, restoring, and refolding. (4) No clauses are included here on mounting or preserving the pages as these are special operations, requiring special arrangements.

1. Preparation for Sewing

a. Unless instructions are otherwise, newspaper volumes shall be as little as possible over 2 inches in thickness, between covers. (Optional —— 2 inches is the preferred size for convenience in handling by binder and reader, and for durability with normal binding methods and materials. Where volumes cannot be logically arranged in the 2-inch size, volumes up to 3½ inches in thickness are practical, but should be covered by special instructions and special estimates.)

PART IV NEWSPAPERS - continued.

1. Preparation for Sewing

   b. All issues shall be carefully collated to detect any damage and to assure continuity of pages and proper sequence of dates. (The binder shall not be held responsible for checking whether the editions furnished are the particular ones desired to be bound or whether all parts of an issue have been furnished.)

   c. Newspapers that are creased or badly wrinkled shall be straightened out as much as possible by sponging and pressing, the entire volume being placed between press boards, while the folds are still damp, and subjected to heavy pressure in a standing press, overnight.

   d. Sections shall be refolded whenever the original fold is crooked or is so far off-center that it would cause the sewing to encroach on the print.

   e. Single leaves shall be tipped-in, in proper position for their sewing.

2. Dividing into Sections

   Because the narrow inner margins of newspapers preclude trimming, sanding, or milling preparatory to sewing, lifts (sections) not exceeding 1/8 of an inch in thickness (or approximately 24 to 28 leaves) shall be considered appropriate for sewing.

3. End Papers

   a. Types of end papers shall be those permitted for books.

   b. In volumes up to 3 inches in thickness, end papers shall be of paper, basis 24 to 36, sixty-pound, with a bursting strength (Mullon tester) of at least 60 points; in thicker volumes a heavier paper of the same grade shall be used.

   c. End papers shall be reinforced with cloth joints of light-weight buckram, 8 ounce khaki, or fabric of equal strength. The cloth shall be wide enough so that it will extend at least two inches beyond the sewing.

4. Sewing

   a. Every newspaper volume shall be sewed in sections either by oversewing (by hand or machine), or cleatsewing, (method to be specified by the using Agency), or by sewing on cord or tapes. If tapes are used, they shall be not less than 1/2 inch wide. In oversewing, the stitches shall be continued to within 1½ inches from top and bottom. In oversewing by hand, the stitches shall be no farther apart than one inch. Newspaper volumes shall not be stitched, nor sewed and tied with thread or cord, nor otherwise fastened clear through.

   b. Sewing shall go through the reinforcing strips of the end papers so as to sew them securely to the first and last sections.

5. Trimming

   Newspaper volumes shall be trimmed as little as possible and, if necessary to prevent bleeding the print, on their heads only.

6. Edges

   Edges may be sprinkled, stained, or left plain, according to instructions.

PART IV NEWSPAPERS - continued.

7. Gluing, Rounding, Backing and Lining

   a. Backs of newspapers shall be glued with approved flexible glue.

   b. Rounding and backing shall be adequate and no more than necessary for the thickness of the volume and the thickness of the covers.

   c. Backs shall be lined with approved lining fabric, extending to within 1 inch of the head and tail, and leaving an extending flap of at least 2½ inches wide on each side. An additional lining of two thicknesses of kraft or rag paper, 24 x 36, sixty-pound basis, shall be glued across the back, over the fabric lining.

8. a. Newspaper-volumes may be either full bound, three-quarter bound, or half-bound. The main cover material shall be heavy-weight buckram or 8 ounce cotton duck.

   b. Covers shall be made over hard-rolled binders board, with uniform squares and in a neat and workmanlike manner. Boards shall be suited in thickness to the size and weight of the volume. Minimum thickness of board for volumes up to 2½ inches thick, and all volumes of tabloid size, must be 0.120 inch; for volumes from 2½ up to 3 inches, 0.160 inch; for volumes 3 inches and more, 0.205 inch.

9. Inlays

   All covers shall have an inlay of flexible paper securely attached to the inside of the backbone of the cover. The paper shall be cut the same length as the cover boards and the approximate width of the back of the newspapers after it has been rounded and backed. The papers shall be of a thickness appropriate to the thickness of the cover boards but not less than 0.012 inch and not more than 0.030 inch.

10. Casing in

   For heavy volumes, either the laced-on or split-board method of attaching boards shall be used. In either case, the flap of the back-lining shall be glued to (or within the split of) each board and firmly pressed to insure permanent adhesion. Thereafter, the end papers shall be glued firmly to each board, or pressed in semi-automatic, automatic, building-in machine which applies pressure to front and back covers of volume as well as applying heat and pressure to joint. Volume should then be stacked front edge to spine for at least 8 hours under weight before shipment.

11. Lettering

   a. Lettering shall be done with X.X. 23 carat gold, deeply impressed to insure long adhesion to the cover. (Optional - at the specific instruction of the library, printer's ink or approved foil may be used.) Imitation gold leaf must not be used.

   b. Lettering may be done either directly upon the back of the cover or upon a leather label afterwards firmly attached thereto.

12. Protective Lacquering of Backs

   All lettered surfaces, except duck, shall be sprayed or treated with a protective material, if required.

PART IV NEWSPAPERS - continued.

13. Inspection

All newspaper volumes shall be carefully opened out and critically inspected for defects. Leaves shall be especially examined to ascertain if any have failed to be caught into the sewing.

PART V APPROVED MATERIALS

Tests and Approval

All tests shall be made, wherever possible, in accordance with standard procedures. In cases where procedures have not been standardized, tests shall be made by methods approved by the Joint Committee of the A.L.A. and L.B.I. after determination by the Research Department of the Library Binding Institute. Specifically, all tests for tensile or breaking strength shall be made by the strip method.

The joint committee shall hereafter maintain, and issue to all interested, a list of materials which have been tested and found to conform to the specifications. This list shall not be considered permanent, but shall be revised and reissued from time to time; and the continuance on the list shall depend on continued conformity with the specifications.

1. Thread

   a. When used for machine oversewing, thread shall be at least equal to the standard recommended by the manufacturers of the machine for its proper operation.

   b. Thread for hand sewing shall be linen. Thread for books that are side stitched by machine shall be at least equal to cotton thread No. 14-4 Cord, polished for the needle, and soft for the shuttle.

2. Boards

   a. Board quality shall measure up to the specifications of Commercial Standard CS50-34 for solid binders board.

   b. The thickness of the board shall be adapted to the size and weight of the volume bound, and shall be between .100 inch and .205 inch.

3. Starch-filled Buckram

   a. (a) The base fabric shall be made of cotton thoroughly cleaned and free from waste. It shall be evenly woven, the warp yarns being woven in pairs. It shall be free from an excessive number of imperfections of manufacture.
   (b) The weight of the stripped fabric shall be not less than 7.9 ounces per square yard.
   (c) The total thread count, including warp and filling, shall be not less than 110 threads per square inch.
   (d) The breaking strength (by the strip method) shall be not less than 120 pounds per inch for the warp and 70 pounds per inch for the filling and not less than 200 pounds per inch for the sum of warp and filling.

PART V APPROVED MATERIALS - continued.

3. Starch-filled Buckram

b. (a) The starch filling (including pigment) shall constitute at least 20 percent of the total weight of the finished fabric.
(b) The filler shall be applied uniformly from selvage to selvage on each side.
(c) The amount of pigment shall not exceed 15 percent by weight of the filler.

c. The finished fabric shall be firm enough to resist rub-off to such a degree that the loss by abrasion will not exceed 8 percent by weight of the fabric when subjected to abrasion for 2 minutes by flint paper 2/0 on a disk two inches in diameter making 1250 r.p.m. under 3 pounds pressure.

4. Pyroxylin-filled Fabrics

a. (a) The base fabric shall be made of cotton thoroughly cleaned and free from waste. It shall be evenly woven, the warp yarns being woven in pairs. It shall be free from excessive number of imperfections of manufacture.
(b) The weight of the stripped fabric shall be not less than 7.9 ounce per square yard.
(c) The total thread count, including warp and filling, shall be not less than 110 threads per inch.
(d) The breaking strength (by the strip method) shall be not less than 120 pounds per inch for the warp and 70 pounds per inch for the filling and not less than 200 pounds per inch for the sum of warp and filling.

b. The dye shall penetrate through the fabric so that both sides shall be equally colored prior to the application of the filling compound (except in the case of "Linen" type finishes).

c. Starch-filled fabrics which are also filled or otherwise treated with pyroxylin shall conform to the specifications for pyroxylin-filled fabrics.

d. (a) The filling compound shall be uniform and homogenous and may be either of the nitro-cellulose or cellulose acetate type.
(b) The filling compound shall constitute at least 10 percent of the total weight of the finished product.
(c) The filling compound shall contain no oxidizable oils.
(d) The plasticizing material, including oil, if any, shall not exceed 20 percent by weight of the filling compound.
(e) The amount of pigment in the filling compound shall not exceed 25 percent by weight of the compound.
(f) Residual solvents, if any, shall not exceed one-tenth of one percent by weight of the finished fabric.

e. The pH value, as determined by standard methods, shall be not less than 6.5 and nor more than 7.5; but in the case of "acid dyes", it shall be not less than 6.0.

f. The finished cloth shall be so waterproof that it will permit no penetration by water within a period of 10 minutes, as determined by the ring test.

g. The finished cloth shall be so greaseproof that it will permit no penetration by oleic acid within a period of 5 minutes, as determined by the ring test.

h. Firm and lasting adhesion of the fabric to boards and end papers shall be readily obtainable without special preparation, using regular library bindery methods and adhesives approved in these specifications.

PART V APPROVED MATERIALS - continued.

4. Pyroxylin-filled Fabrics

i. The finished fabric shall be firm enough to resist rub-off to such a degree that the loss by abrasion will not exceed 8 percent by weight of the fabric when subjected to abrasion for 2 minutes by flint paper 2/0 on a disk two inches in diameter making 1250 r.p.m. under 3 pounds pressure.

j. The finished fabric shall be free of marked odor.

k. Colors shall be at least as fast to light as the equivalent colors of starch-filled buckrams.

5. Pyroxylin-coated Fabrics

a. The drill-base pyroxylin-coated fabrics shall have the following physical characteristics:
(a) The weight of the stripped fabric shall be not less than 5.2 ounces per square yard.
(b) The thread count per inch shall be not less than 62 in the warp and 36 in the filling.
(c) The breaking strength (by the strip method) shall be not less than 75 pounds per inch for the warp and 43 pounds per inch for the filling.
(d) The coating compound shall constitute at least 45 percent by weight of the finished fabric.

b. The sateen-base pyroxylin-coated fabrics shall have the following physical characteristics:
(a) The weight of the stripped fabric shall be not less than 8 ounce per square yard.
(b) The thread count per inch shall be not less than 100 in the warp and 64 in the filling.
(c) The breaking strength (by the strip method) shall be not less than 95 pounds per inch for the warp and 80 pounds per inch for the filling.
(d) The coating compound shall constitute at least 35 percent by weight of the finished fabric.

c. In all pyroxylin-coated fabrics, the dye shall penetrate through so that both sides shall be equally colored prior to the application of the coating.

d. (a) The coating compound shall be uniform and homogeneous and may be either of the nitro-cellulose or cellulose acetate type.
(b) The coating compound shall contain no oxidizable oils.
(c) The plasticizing material, including oil, if any, shall not exceed 35 percent by weight of the coating compound.
(d) The amount of pigment in the coating compound shall not exceed 30 percent by weight of the compound.
(e) Residual solvents, if any, shall not exceed one-tenth of one percent by weight of the finished fabric.

e. The pH value, as determined by standard methods, shall be not less than 6.5 and not more than 7.5; but in the case of "acid dyes" it shall be not less than 6.0.

f. The finished cloth shall be so waterproof that it will permit no penetration by water within a period of 10 minutes, as determined by the ring test.

PART V APPROVED MATERIALS - continued.

5. Pyroxylin-coated Fabrics

g. The finished cloth shall be so greaseproof that it will permit no penetration by oleic acid within a period of 5 minutes, as determined by the ring test.

h. Firm and lasting adhesion of the fabric to boards and end papers shall be readily obtainable without special preparation using regular library bindery methods and adhesives approved in these specifications.

i. The finished fabric shall be free of marked odor.

j. Colors shall be at least as fast to light as the equivalent colors of starch-filled buckram.

6. Leather

Leather shall be guaranteed free from injurious acids, and skins so stamped.

7. Back-lining

Back-lining shall be Canton flannel napped on one side, having a thread count of 44 in the warp, 42 in the filling, and a breaking strength of at least 42.5 pounds per inch for the warp.

8. Inlays

All covers shall have an inlay of flexible paper securely attached to the inside of the backbone of the cover. The paper shall be cut the same length as the cover boards and the approximate width of the back of the book after it has been rounded and backed. The paper shall be of a thickness appropriate to the thickness of the cover boards but not less than 0.012 inch, and no thicker than 0.025 inch.

9. Reinforcing Fabric

a. Reinforcing fabric for end papers shall be of a quality equal to muslin having a thread count of 72 to 85 in the warp, and 60 to 75 in the filling, and a breaking strength of at least 51 pounds per inch for the warp and 44 pounds per inch for the filling.

b. In the case of Type Z end papers, it is permissible to use reinforcing fabrics which, in combination, have a strength equal to that specified in "A".

10. End Papers

a. With the exception mentioned in 9B, end papers for books and ordinary magazines shall be of a subdued or neutral tint, basis 24 by 36, sixty pound, with a bursting strength (on the Mullon tester) of at least 60 points.

b. In the case of Type Z end papers, it is permissible to use paper having a bursting strength of less than 60 points for each of the middle leaves.

11. Gold

Gold shall be genuine X.X. 23 carat. (Foils and inks are not specified but shall be such as will insure legible lettering during the life of the binding).

12. Glue

Glue for backs shall be high-grade flexible, equal to flexible glue approved by the Research Department of the Library Binding Institute. (Planatol Cold Emulsion Adhesive, Type BB or Type BB Super, is the recommended polyvinyl resin paste for the cleat sewing process.)

PART V APPROVED MATERIALS - continued.

13. Paste

Paste for casing-in shall be glycol, polyvinyl resin or an equal nonwarp paste.

SPECIFICATIONS FOR BINDING PAPER-BACK BOOKS

SIZE: Not more than 1½" thick and 11" high.

COVER MATERIALS: 70 pt. board covered with medium weight binders cloth overall, or 0.001 perfect plastic "Mylar" film.

FLY SHEET: Single, 60 pound.

GLUING, BACKING & LINING: Backs shall be glued with approved flexible glue and lined with cheesecloth or flannel extending to within 1/2" of head and tail of books and well onto each cover (approx. 1-1/2"). Rounding not required.

STAMPING: Title and Author 1 line vertical on backbone only.

COVERS: Flush cut.

MOUNTING: Binder may be required to mount front and back paper covers on finished book.

SPECIFICATIONS FOR BUDGET BINDING

SIZE: Not more than 3" thick and 18" high.

COLLATING: The Library will collate issues in proper sequence. Contractor will not be required to remove covers, advertising and similar material, but may be required to bind them into the volume.

REMOVING BACKS: Backs shall be sanded off, milled off or removed by taking a very narrow trim, approx. 1/16", so as to leave all back margin possible.

SEWING AND GLUING: Cleat sewing shall be used and the threads shall be secured by applying sufficient quantity of adhesive to the spine to fill the cleats. Polyvinyl adhesive or a hot melt adhesive can be used. The hot melt shall have a viscosity of 6000 - 9000 CPs' and a cold crack at 20 mils to 5° F.

COVERS: Covers shall be made of a coated TYVEK (DuPont 1076) material supplied in six colors. Cover board from .080 to .135 inch shall be used depending on size and weight of volume.

-continued-

SPECIFICATIONS FOR BUDGET BINDING - continued.

LETTERING: All lettering will be done in white. Lettering shall be done in a clear type of a size appropriate to the book and position as instructed by Library.

INSPECTION: All magazine volumes shall be carefully opened out and critically inspected for defects in binding or errors in lettering.

DETAILED SPECIFICATIONS AND SPECIAL CONDITIONS

1. Detailed Specifications

The total binding for the past fiscal year was approximately twenty three thousand and five hundred (23,500) volumes.

The binding was distributed by size and type as follows:

Height In Inches	Books New & Rebound	Serials New & Rebound
7 and under	1.0	0.2
8	4.9	1.2
9	8.9	5.1
10	10.0	26.6
11	4.1	17.7
12	3.6	14.7
13	0.4	0.1
14	0.1	1.1
15 and over	0.1	0.2
TOTAL	33.1%	66.9%

BINDING SPECIFICATIONS
University of Missouri
6 pp.

In addition to the above, there will be a small amount of 8½" x 11" Thesis Binding to be done by Contractor and also a small amount of Pamphlet Binding and Recasing.

These data are furnished for informational purposes only and it is understood that the Contractor shall furnish the actual requirements of the University, whether more or less than prior requirements as set forth above.

The contract will not include·

(1) The binding of newspapers and such occasional serial publications as may be designated by the University.

(2) Such repair work as may be done by the University.

(3) The edition binding of books and bulletins published by the University.

(4) The rebinding, restoration, or repair of rare books.

Bids shall be based on heights, style and type of binding as indicated on the Bid Form.

Bidders may establish qualifications for doing work by either (1) submitting evidence that their work has been certified as Class A by the Joint Committee of the American Library Association and the Library Binding Institute, or (2) submitting (a) samples of work for examination by the University, (b) the names of two University Libraries for which they have done binding, and (c) a statement of plant equipment owned and operated by them, their working force and their ability to give satisfactory service and a high grade of workmanship.

Class A Binding

(1) All volumes shall be bound in accordance with "Library Binding Institute Standard for Library Binding," dated January 1, 1971. (A copy of these specifications is attached.)

(2) In addition to these minimum specifications, the following requirements must be observed:

(a) Every section of every volume shall be double scored before over-sewing.

(b) End papers, described as Type X in Section 5.1.5 of the Standard, shall be used.

(c) Covers shall be of heavy weight pyroxylin coated buckram (Holliston, Interlaken or Sayebuck) unless otherwise instructed.

(d) All heavy plates and maps must be guarded or hinged with fine muslin. Thick folded maps and plates must have stubs of equal thickness inserted to square the volume.

(e) Trimmed edges shall be left plain.

(3) Uniformity of binding with previously bound volumes of sets must be maintained. All cost of preparing rubs, dummies, sample backs or of transporting sample volumes to and from bindery will be borne by Contractor. In order to achieve and maintain uniformity of binding of sets, the binder shall make a sample back for each set the first time he binds or rebinds a volume of the set, which shall be kept by him for reference. When directed, he shall provide, for each set for which he has bound one or more volumes a photostatic copy of the sample back in his files, which shall indicate the imprint, the height of the finished bindings, the trimmed size of the volume, the exact material used, e.g. Holliston #2247 and any special instructions applicable to the set. The charge for such copies shall be invoiced in the same manner as for binding.

(4) Lettering shall include author, title, volume, date, series and call number as required, also name of the University Campus designated. The basic contract price shall include lettering not to exceed 11 lines.

(a) Except for tan and light green covers and for volumes otherwise specified, lettering shall be done with white foil. Tan and light green covers shall be lettered in black. When gold lettering is specified, it shall be done with XX .23 carat gold.

(b) The size of letters used shall be appropriate for the size of volume. In case of sets where volumes are to thin to use the previously established size of letters, condensed type of the same height shall be used if possible, otherwise a smaller type may be used, but an indication of this variation shall be noted on the sample back.

(c) The style of type used in the call number shall make obvious the distinction between "i" and "j", "l" (one I (eye) and l (ell).

(d) Law books, when so instructed, shall have labels affixed.

Pamphlet Binding

(1) Certain material will be sent for pamphlet binding, which will include items not more than 3/4" in thickness.

Bidders will submit samples of the type of binding which they propose to do.

The minimum specifications for this type of binding shall be:

(a) Material is to be bound as submitted without collation by the binder.

(b) Pamphlets may be either machine stitched or stapled, over-sewing is not required.

(c) No lettering is required.

(d) When so instructed the original cover shall be pasted to the cover boards. Otherwise boards will be covered with cloth or suitable paper.

(e) Boards shall be of suitable weight which will not warp.

(2) Special Work

Whenever the nature of the material requires special work (e.g., page mending, hand sewing) it shall be done at a reasonable rate. The University Librarian shall be advised of the necessity of such work and the probable cost in all cases where the instructions accompanying the material have not indicated the special work to be done. No special work shall be done until authorized by the Univeristy Librarian.

If required by the University Librarian the Contractor must provide a multiple form for binding instructions and an individual plate with bindery instructions in code for every periodical item that is to be bound.

2. Contract Security

The amount of the Performance Bond to be furnished in accord-

ance with Paragraph Eight (8) of the Information For Bidders and General Conditions is Six Thousand Dollars, ($6000).

3. Delivery

Contractor must furnish delivery and pick-up service.

All completed work shall be delivered in good order to a point in Columbia, Missouri, as designated by the Librarian with all transportation charges both ways to be borne by the Contractor.

Failure on the part of the Contractor to deliver finished work, except "Rush Work" within thirty (30) days after receipt of such work by him will subject him to the deductions set forth next below from his charge for binding each such volume so delayed.

Delivery in 31 to 45 days	5% deduction
Delivery in 46 to 60 days	10% deduction
Delivery in over 60 days	20% deduction

To such work as the University Librarian may designate "Rush Work" immediate attention will be given. "Rush Work" will not exceed five percent (5%) of all work to be bound and will not exceed more than fifty (50) volumes in any one month. All "Rush Work" Shall be returned by express or parcel post if so ordered by the University Librarian and any failure on the part of the Contractor to return such finished "Rush Work" to the transportation company within twenty (20) days after receipt of such "Rush Work" at his plant will subject him to the deductions set forth next below from his charge for binding each volume so delayed. Failure on the part of the Contractor to deliver finished "Rush Work" which is picked up and delivered by the Contractor within twenty (20) days after pick-up of such "Rush Work" by him will subject him to the deductions set forth next below from his charge for binding each such volume so delayed.

Delivery in 21 to 35 days	5% deduction
Delivery in 36 to 50 days	10% deduction
Delivery in over 50 days	20% deduction

4. Payment

All Bids are to be submitted on the basis of cash payment for the books. Payment on each shipment of books will be made within thirty (30) days after completion of delivery and acceptance by the University.

Application for payment shall be made by Contractor on Contractors regular invoice forms and submitted to the University in triplicate.

Title to and risk of loss and damage as to all items of books shall remain in and be the responsibility of the Contractor until delivery and acceptance of the books by the University.

5. Authorization Of The Work

In performing the contract, the Contractor shall execute work only at the direction of the University Librarian, or such other representatives of the University as are duly authorized in writing by the Vice President for Business Management of the University of Missouri.

6. Execution Of Work

Volumes for binding and rebinding will be picked up by Contractor at Contractor's cost and expense in conformity with a pick-up schedule which is to be submitted by Contractor to the University Librarian for approval. Contractor shall provide suitable containers. Pick-ups shall be made at intervals of not less than two (2) weeks nor more than three (3) weeks; at least twenty-two (22) pick-ups shall be made each year. Pick-ups shall be between the hours of Eight-Thirty A.M. (8:30) and Three-Thirty P.M. (3:30), Monday through Friday and shall be in accordance with schedule as satisfactory to the University.

If incomplete volumes are received by Contractor, Contractor shall inform the University Librarian of missing parts and no deductions, as set forth above, will be made until expiration of the above time limit after the date that such missing part have been furnished to theContractor by the University.

The Contractor will be required to furnish all labor and materials to complete binding and rebinding of such books and periodicals as are received by him from the University Librarian.

Prompt execution of all work will be required. Time will be considered an essential element of the contract.

7. Workmanship

All work shall be done according to specifications and in a first-class manner in every particular.

Any binding or rebinding done by Contractor which shall be rejected by the University Librarian because of inferior workmanship, or materials, or incomplete volumes as certified by the University Librarian of the University whose decision shall be final in the matter, shall be properly bound or rebound by the Contractor without expense to the University either for transportation, labor or material.

8. Amendment To Information For Bidders And General Conditions

Paragraph Eighteen, Contract Documents, Page A/7, is amended by adding "as a contract document, University Purchase Order."

Paragraph Three, Bid Security under Information For Bidders And General Conditions is amended as follows:

Delete the words "five percent (5%) of the amount bid upon" and insert in lieu thereof Two Thousand Dollars ($2000).

9. Risk Of Loss

All risk of loss on account of destruction of or damage to any and all volumes, from whatsoever cause, from the time they are delivered by the University to the carrier, for delivery to the Contractor, until the time they are actually returned to and received by the University, shall be upon the Contractor.

10. Contract Period

The contract to be awarded hereunder shall be for Binding and Rebinding Books and Periodicals as ordered during the period January 1, 1977 through December 31, 1978, subject, however, to the right of either party to terminate the contract at the end of the first year by giving to the other sixty (60) days written notice of intent to terminate.

BINDING SPECIFICATIONS
University of Massachusetts
14 pp.

University Library

Binding Contract Fiscal '78

This binding contract, not to exceed total is to be divided as follows:

1. Approximately miscellaneous periodicals to be bound "Class A".
2. Approximately miscellaneous periodicals to be recased "Class A".
3. Approximately miscellaneous periodicals to be bound storage.
4. Approximately paperback books to be bound "Vinabind" or equal.
5. Approximately music scores.
6. Approximately pamphlets.
7. Approximately monographs to be bound "Class A".
8. Approximately monographs to be recased "Class A".
9. Approximately theses.
10. About % of the dollar total of the contract may be utilized for special types of binding such as portfolios and slip cases.

All work is to be done according to the specifications and instructions which are attached.

The distribution of the number of volumes in each category to be bound is strictly approximate and may considerably exceed or considerably fall short of the figures estimated, but in no case will the total number of volumes for the contract or the total value of the contract be exceeded.

General Information

1. Prices quoted must not include any taxes for which the contractor may claim exemption because of doing business with the University of Massachusetts Library. The University of Massachusetts Library is exempt from paying any sales or Federal excise tax or any transportation tax.
2. The award when made may not be assigned or transferred without the written consent of the University of Massachusetts Library Binding Office.
3. The contractor must be able to prove that he is able to handle the volume of work stated herein. This will be based on the dollar volume of business completed in the last two years. On request of the University, the binder shall furnish the names of colleges and university libraries for each of which the binder has within the past two years bound not less than 6,000 or more Class A periodical volumes annually.
4. The University of Massachusetts Library reserves the right to reject any or all bids.
5. This contract may be cancelled on 30 days notice if contractor's performance fails to meet specifications or fulfill instructions especially with regard to pick-up and deliveries.

BEST COPY AVAILABLE

Special Instructions of the Contract

1. Pickups and Deliveries

The initial pickup is to be made at a mutually acceptable date after awarding of the contract. Additional pickups will be made every week thereafter. First delivery will be made no more than 20 working days after the first pickup. All volumes will be returned to the Library as soon as possible unless otherwise requested. Subsequent deliveries should coincide with pickups. No materials are to remain in the contractor's care longer than 20 working days after they have been picked up. This schedule is to be followed until the contract is completed. For any delay over the specified 20 working days, without authorization from the University Library, a ten per cent (10%) deduction will be taken from the invoice, for each week of delay or part thereof.

No charge will be made for transportation. The contractor must provide direct truck transportation, with inside pickup and delivery to a designated point in the University Library. Material will be packed ready for pickup by the staff of the University Libraries in boxes supplied by contractor. If the contractor requires these boxes to be sealed, the tape for this purpose will also be supplied by the contractor. No shipments are to be made by common carrier.

2. Packing

Material returned to the Library shall be packed in cartons legibly identified as to lot number. The contractor shall insure that all volumes of the same type of binding are packed in the same carton or cartons when returned to the Library.

3. Lot size

Each week the Library will attempt to provide to the contractor volumes in the following quantities:

Class A Periodical	100-150
Class A Monographs	15-40
Storage Binding	15-30
Paperbacks--Adhesive Bound	10-30
Pamphlets	15-30

No guarantee of the actual number of volumes to be supplied each week is implied or warranted. Each lot size will be individually numbered. All volumes in a lot shall be returned to the Library at the same time.

BEST COPY AVAILABLE

4. Claims

Items not returned to the Library with the lot in which they were sent will be claimed by the Library within 10 working days of the receipt of a lot. Response to such claims by the contractor will be made within 10 working days of the receipt of the claim.

5. Rush Shipments

During the course of the contract year up to five percent of the total binding may be sent on a "Rush" basis. Such material shall be returned within 2 weeks of pick-up or earlier.

6. Labels

Each volume bound on this contract shall contain a label or stamp, approved by the University of Massachusetts Library, identifying the bindery and showing the month and year in which the volume was bound. This stamp or label shall be placed in the volume at a location selected by the Library.

7. Monographic Binding Forms

Within 45 days from the date of award of this contract, the contractor shall provide the Library with a sufficient number of monographic binding forms to cover the life of the contract. The forms shall be of a size and composition selected by the Library.

8. Invoices

Invoices shall cover complete lots only and shall be rendered at time of delivery. The invoice format and the terminology used to describe work performed must meet the approval of the Library.

9. Errors

Any binding errors made by the contractor shall be corrected at his expense. Any extra transportation costs resulting from such errors shall be paid by the contractor. Such material shall be returned to the Library within two weeks of pick-up or earlier.

10. Type of Binding

The category of binding specified for each item by the Library (e.g. Class A monograph, score binding etc.) shall not be changed by the contractor without the prior consent of the Library. If an item cannot be bound in the manner specified by the Library, it should be returned unbound by the contractor, with an indication of the reason for its rejection.

11. Insurance

The contractor shall insure, at his expense, all books and other library materials against loss or damage from any cause, from the time they leave the Library until they are returned. As proof of compliance with this requirement, the contractor shall furnish a certificate of insurance to the Library prior to the date of the initial pickup under the contract. Rare or valuable items, while at the bindery and when not being worked on, shall be kept in a fireproof vault or safe. Rare or valuable items will be designated as such by the Library and sent under separate cover. Books and other Library materials lost or damaged while at the bindery or in transit must be replaced by the contractor, or the Library must be reimbursed by him for the total replacement cost of such volumes. Replacement must be made within 60 days of the reported loss or damage. Reimbursement in lieu of replacement must be made within 30 days in the form of a check made out to"University of Massachusetts Library Trust Fund".

12. Performance Bond

The contractor agrees to file a Performance Bond with the University of Massachusetts within ten (10) days from the date of award of this contract. The Bond shall be in the amount of 10% of the amount of the contract. It shall provide that if the bidder fails to perform any such obligations, the University of Massachusetts may recover from the contractor and the surety (or either of them) 100% of the damages to the Library caused by such default. The Performance Bond shall be placed with a surety company or companies having a policy holders' rating not lower than "A" and financial rating now lower than "AA" in the latest edition of Best's Insurance Guide, and shall be acceptable in form to the Library.

13. Inspection

The binder shall permit his plant to be inspected by representatives of the University of Massachusetts prior to the awarding of the contract and from time to time during the course of the contract in order that they can determine whether the binder is capable of fulfilling or is fulfilling the terms of the binding contract. These inspections will take place during normal work hours of the plant.

University of Massachusetts/Amherst
University Library

Class A Monograph and Class A Periodical Binding Specifications

General Binding Instructions

Periodicals - Class A

Periodical volumes will vary in height up to 18" and up to 3" in thickness. Volumes which will measure over 3" in thickness when bound are not to be processed and are to be returned to the Library. Volumes are to be oversewn, or sewn through the folds as required and bound in washable group F library buckram equal in quality to Treasure Trove Library Buckram. Color and lettering are to match sets now in use.

Volumes unsuited for oversewing and without folded sections shall be bound with a high grade polyvinyl adhesive.

Lettering up to nine (9) lines, will consist of title, volume and year (with additions such as months, parts or page numbers etc. where stated). Lettering is to be in gold unless otherwise specified on the binding slip. Lettering may involve foreign language titles which require the use of accent marks: circumflex, umlaut and other standard marks. Volumes must be lettered as previously done, with heights of lettering to match sets now in use. To insure this, the binder must be prepared, if necessary, to make rubbings of the spines of the 10,000 active periodical titles currently in the collection of the main library and its branches. This undertaking must be completed prior to the date of the initial pickup under the contract. Binder is responsible for the accurate and speedy reshelving of all volumes pulled for rubbings. The Library will provide the binder with a list of periodical and serial titles for which rubbings must be made.

Periodicals must be collated and missing pages reported to the Library Bindery Supervisor for replacement before binding. Damaged pages are to be repaired. Margins should be checked for proper type of binding and each page set out where necessary.

All wire staples are to be removed.

Title page and Table of Contents, when they are not given page numbers in the volume, are to be removed and bound in the front of each volume. Indexes are to be bound in the back of each volumes.

Covers and advertising will be bound in accordance with their normal order in each volume except for blank back covers which will be removed.

Monographs - Class A

Monographs whose height may vary anywhere up to 14", are to be oversewn if width of margins and quality of paper permit. Volumes unsuited for oversewing and without folded sections shall be bound with a high grade polyvinyl adhesive. They are to be bound in full buckram of one color unless specified by the Library to the contrary. The Library's preference is red (2288). Number in parentheses is for Treasure Trove Library Buckram.

The contract includes up to five (5) lines of lettering per volume. Lettering is to be in white foil unless otherwise specified. Lettering shall be ALA-LBI standard and it should usually consist of the following: Author's surname, a "break" (a 1/2 rule), and the title. Lettering may involve foreign language titles which require the use of accent marks, circumflex, umlaut and other standard marks. Normal lettering (transverse lettering) will be standard except when insufficient thickness, or other reasons require books to be lettered lengthwise on the spine. Lengthwise lettering shall be placed so that the author and title read downward on the spine.

Special Binding Instructions

With the exception of the following modifications or substitutions, the specifications given in the Library Binding Institute's Standard for Library Binding (5th edition, revised 1971) shall apply, as appropriate, for all Class A monographs and Class A periodical binding.

5.8.1 Oversewing (substitute for LBI 5.8.1)

In general, volumes having inner margins of 7/16 inch or more, and printed on good paper, or volumes which are not in folded sections but which have inner margins adequate for oversewing, shall be sewn with cotton thread by the oversewing method. All sections shall be pasted. Sewing shall not be closer to the head and tail of the book than 1/4" after trimming. No volumes shall be cleat sewn.

5.8.2 Exceptional Volumes (Flexible sewing) (substitute for LBI 5.8.2)

All volumes, made up in signatures or folded sections and with inner (back) margins of less than 7/16", or with brittle paper, or with very stiff paper, or which exceed three inches in thickness,

or upon instructions from the Library, shall be sewn through the folded sections, on cords or unbleached tapes of the best quality 1/2" in width. The number of cords or tapes on which books are to be sewn shall be as follows:

Thickness	Height	Number of tapes or cords
up to 2"	up to and including 10"	3
up to 2"	over 10" and including 14"	4
up to 2"	over 14"	5
over 2"	up to and including 10"	4
over 2"	over 10" and including 14"	5
over 2"	over 14"	6

When hand sewing is employed, all weak folds shall be reinforced and loose leaves hinged in with strips of rag bond paper of a weight appropriate for the material in hand. Volumes too brittle to bind by hand sewing shall be returned to the Library. NOTE: No volume which the Library designates is to be sewn through the folded sections on tapes or cords shall be sewn (or otherwise bound) in any other manner without the express permission of the Library. ANY BINDER WHO DOES SO SHALL BE PENALIZED THE FULL REPLACEMENT COST OF THE VOLUME.

Volumes, selected for Class A binding, but unsuited for oversewing and without signatures or folded sections shall be bound using a high grade polyvinyl adhesive with the sheets being fanned in both directions to assure proper adhesion. No volumes shall be cleat sewn.

5.14 Casing-In (add to end of LBI paragraph 5.14)

To provide additional strength at the top end of the spine a piece of cord of appropriate thickness shall be placed at the head of the inlay before turning the fabric over the boards in periodical volumes over one inch thick and monographic volumes over two inches thick.

A sample of both types of Class A oversewn binding (using an actual periodical and an actual monographic volume) as defined by these specifications and illustrative of production work must be submitted with the bid.

No other type of binding than those stated in these Class A specifications shall be used by the contractor.

University of Massachusetts/Amherst
University Library

Storage Binding Specifications

1. All volumes will be bound as laid.

2. All volumes must have lettering information consisting of a brief title, volume number, year, etc. (not to exceed 7 lines). Lettering shall be performed in accordance with rubbings taken prior to the date of the initial pickup under this contract as outlined in paragraph 3 of "Class A Monograph and Class A Periodical Binding Specifications, General Binding Instructions, Periodicals--Class A". Lettering shall be done in white foil in clear type and impressed to insure long adhesion to the cover. For those new titles for which no examples exist lettering should be of a size appropriate to the volume and shall follow a standard acceptable to the Library.

3. Volumes will be bound using a high grade polyvinyl adhesive with the sheets being fanned in both directions to assure proper adhesion. Maximum thickness not to exceed 3".

4. Volumes should not be trimmed unless it is absolutely necessary to open the pages, as for example, in some foreign volumes.

5. A reinforcing cloth shall be applied to the spines of all volumes extending at least 1 1/4" onto the covers and within 1/2" of the head and tail of each volume.

6. Covers shall be made from hard rolled binders board of 0.090" or thicker (Davey Red label or equal). The square or margin shall be at least 1/8" around the volume.

7. A washable group F library buckram equal in quality to Treasure Trove Library Buckram shall be used. The Library shall select the color. The covering material shall be glued to the cover using a high grade flexible animal glue or polyvinyl adhesive.

8. The cover material shall be uniformly turned in enough to insure proper adhesion with a required minimum of 3/4 inch on all sides.

9. All covers shall have an inlay of flexible paper, with the grain running lengthwise of the inlay and securely attached to the inside of the backbone of the cover. The paper shall be cut approximately the same width as the back of the volume and as long as the cover boards. The paper shall be of a thickness appropriate to the thickness of the cover boards.

10. A sample of the binding (using an actual periodical volume) as defined by these specifications and illustrative of production work must be submitted with the bid.

University of Massachusetts/Amherst
University Library

Paperbacks--Adhesive Bound Specifications

1. This binding is to be available for specified single issue items not exceeding 12" in height and 2" in thickness.

2. The entire original cover, including backbone, is removed from the paperback book content.

3. The complete original cover is then mounted on hard binder's boards and reinforcing is to be applied to the interior of the cover backbone.

4. The book content is to be completely rebound after thorough removal of old adhesive, using a special non-drying permeating adhesive.

5. After gluing, reinforcing is to be applied to the book spine in the form of a heavy binder's cloth strip extended across the rounded book back and attached to the front and back covers.

6. The now-hardened book cover is then encased in a tough, clear Mylar plastic film of a thickness to be approved by the Library.

7. The rebound book is then re-cased back into hard-bound covers.

8. The finished product, regardless of narrowness of margins, is to open flat at every page.

9. The finished product is to be guaranteed for 50 circulations or 2 years, whichever comes first.

10. For paperbacks, whose original covers are either too worn, torn, or otherwise unsuitable, a cloth binding is to be used. The binding is to be essentially identical to that process described above, except that the original cover is discarded and replaced with a cloth-bound, hard cover on which the book's title and author are lettered down the backbone of the book.

11. A sample of both types of binding ("Vinabind" and cloth) as defined by these specifications and illustrative of production work must be submitted with the bid.

University of Massachusetts/Amherst
University Library

Pamphlet Binding Specifications

1. This binding is to be available for presently bound or unbound single issue items not exceeding 13" in height and 1" in thickness.

2. Pamphlet binding will consist of both a durable clear vinyl front cover and a durable smooth press board back cover of a quality, thickness and color acceptable to the Library. The top and bottom outer corners of the vinyl cover are to be slightly rounded.

3. The spine of each volume will be wire stitched with either two or three wires depending upon height of the volume. Covers will be attached and reinforced with tape (Mystic or equal) of a color and quality approved by the Library. The reinforcing tape shall be applied to the spines of all volumes, extending at least 1 1/4" onto the covers and to the head and tail of the volume.

4. Volumes should not be trimmed unless they have uncut pages as for example, in some foreign volumes. The Library will indicate on its bindery form when other reasons make trimming necessary.

5. A sample of the pamphlet binding as defined by these specifications and illustrative of production work must be submitted with the bid.

University of Massachusetts/Amherst
University Library

Recasing Specifications

This type of binding will be requested when the Library wishes to preserve the inner margins of a volume whose spine is in satisfactory condition with no breaks in the sewing or adhesive.

Original sewing and adhesives on spine are to be retained.

New back lining appropriate to the thickness of the volume will be applied to the spine and extend onto the boards.

End papers will be stitched into existing signatures.

Volume to be bound in full buckram.

All work and materials are to be in accordance with the Class A specifications within this contract.

A sample of recasing as defined by these specifications and illustrative of production work must be submitted with the bid.

University of Massachusetts/Amherst
University Library

Music Score Binding Specifications

Music Scores are to be bound as Class A periodicals with full buckram and gold stamped on the spine. However, the scores must be hand sewn on tapes to lie flat on a musical rack. A pocket must be provided in back inside cover when parts accompany score.

A sample of music score binding as defined by these specifications and illustrative of production work must be submitted with the bid.

University of Massachusetts/Amherst
University Library

Theses Binding Specifications

1. Theses for the master's degree shall be bound in red buckram (Treasure Trove no. 2988 or equal) and the doctoral degree (dissertations) shall be bound in black buckram. The Library will indicate the color to be used in each case.

2. Theses shall be stubbed for build-up where necessary.

3. Normal lettering (transverse lettering) will be standard except if theses are of insufficient thickness, when lettering will be lengthwise from top to bottom of spine. Lettering shall be in gold, and consist of the author's surname, the name of the department granting the degree, the type of degree (abbreviated) and the year. This information will be designated by the Library.

University of Massachusetts/Amherst
University Library

Specifications for Special Types of Binding

Portfolios

Portfolios shall be constructed of hard rolled binders' board of a weight appropriate to the size of the portfolio. It shall consist of a full buckram cover, of a color selected by the library, with 3 flexible flaps and secured with the appropriate number of black twill cotton tape ties. All paper stock which is used in the construction and which may come in contact with the contents must be acid free.

Slip Cases

Slip-cases shall consist of a full buckram cover constructed of hard rolled binders' board of the appropriate weight and covered in buckram of a color selected by the library. A flexible case constructed of the same buckram shall be adhered to the inside back cover with the opening toward the spine. All paper stock which is used in the construction and which may come in contact with the contents must be acid free.

Methods of binding other than those specified above may occasionally be requested by the Library. In such cases, the prices charged by the contractor shall be the subject of negotiation between the contractor and the Library.

Samples of a portfolio and of a slip-case as defined by these specifications must be submitted with the bid.

PLANNING DOCUMENTS
Washington University
2 pp.

WASHINGTON UNIVERSITY LIBRARIES'

BINDING REQUIREMENTS FOR FY 77/78,
Beginning on July 1, 1977

I. Pick-up, Deliveries

A. Volumes to be bound must be picked-up every week from Olin Library's Binding Division and/or Loading Dock. Each shipment must be returned in 21 days. Rush service must be provided in two weeks, the material being returned when company truck makes its regular pick-up.

B. Company will be subject to a penalty of 25¢ per volume per day for each day exceeding 21 days in return of shipments, except during the period in which Thanksgiving and Christmas occur when delivery will be required within 28 days.

II. Price Quotations. Please quote in the Following:

A. Monographs

1. Class A binding (all sizes and types, except theses and dissertations).

2. Class II binding. Please provide list of requirements and restrictions.

3. Permabound.

4. Scholarly rebind.

5. Theses and Dissertations.

6. Pamphlet binders.

B. Periodicals and Serials

1. Standard Class A binding (all sizes, and including hand sewing if necessary).

2. Class II binding. Please provide list of requirements and restrictions.

C. Extra and Special Operations

1. Printing of shelf list nos. (Call nos.) per line.

2. Making of portfolios.

3. Making of slip cases

C. Extra and Special Operations contd.

4. Hand sewing.

5. Making of map pockets.

6. Binding for newspapers.

7. Inserting Washington University Libraries' book plates within books, periodicals, and dissertations.

8. Inserting Washington University Libraries' book card pockets within books, periodicals, and dissertations.

PLANNING DOCUMENTS
University of Connecticut
3 pp.

3/25/77

To: Administrators, Subscription Committee, F. Batchelor, V. MacLaren, J. Oldham, P. Price, R. Schimmelpfeng

From: Mary Balmer

Re: Replacement of brittle/worn-out journals

In keeping with the administration's decision to conduct an in-depth study to identify journals in poor condition that should be replaced, I have drafted the attached instructions and form to be used for the project. I would appreciate your comments and suggestions regarding the feasibility of the form and the information requested. Please respond quickly so that the project can be begun as soon as possible. Thank you.

The project will be implemented in 3 stages:

1. Information gathering including the identification of journals, both in storage as well as in the journal stacks, that are in poor condition and the determination if replacement copies are available.

2. Decisions as to the dispensation of each title.

3. Establishment of priorities for replacement.

The attached form will be used for all stages with the information below the double solid line to be used in stages 2 and 3. The information recorded on the form will be used to determine if volumes should be retained, replaced, rebound, etc. The form is designed to provide as much pertinent information as possible at one time so that repeated examination of the volumes will not be required.

Jan Oldham and Vernon MacLaren will undertake the first stage. The second and third stages will probably involve the Subscription Committee as well as some additional staff to be identified later.

DRAFT

GUIDELINES FOR COMPLETING JOURNAL REPLACEMENT INVENTORY FORM

1. A separate form should be used for each title that is in poor condition.

2. All information should be recorded legibly. Wherever multiple descriptions are listed, the appropriate description should be circled.

e.g. Paper: (Brittle) Fair Good

3. Title: The main entry under which the journal is listed and shelved.

4. Library holdings: Total holdings in our collection.

5. The major guideline to determine if the paper is brittle is if the corner of the page breaks off when folded.

6. Covers: This information is needed to determine if the volume needs to be rebound or recased.

7. Margin size: This information is needed to determine if volume can be oversewn or has to be recased instead.

8. Mutilated: Circle if there is obvious mutilation such as large tears or missing pages. Do not spend time actually paging through volumes to determine missing pages, etc.

9. Poor condition because of: Circle what seems to be the major reason for the poor condition of the volumes.

10. Use: Circle appropriate description if this can be easily determined because of physical condition or familiarity with re-shelving patterns.

DRAFT

JOURNAL REPLACEMENT INVENTORY

TITLE:

LIBRARY HOLDINGS:

VOLS & DATES IN POOR CONDITION:

Vols. known to missing:

PHYSICAL CONDITION:

Paper: Brittle Fair Good

Covers: Missing Torn or separated Good

Spine/gutter margin size: Left _____ Right _____

Mutilated

Poor condition because of: Use Paper Binding
Other (Specify)

USE: Heavy Average Minimal

Date examined: Initials:

AVAILABILITY:

Microform (vols., dates, price, format, source):

Reprint (Vols., dates, price, source):

REPLACE REBIND RECASE WITHDRAW RETAIN AS IS

If replace, also retain original: yes no

PRIORITY: 1 2 3

SYRACUSE UNIVERSITY LIBRARY

Memorandum

PLANNING DOCUMENTS
Syracuse University
2 pp.

Date July 5, 1977

To Mr. Bullard

From Binding/Retention Committee

Subject Development of Binding/Retention Policy

Outlined below are the recommendations of the Binding/Retention Committee for the establishment of a coordinated binding/retention policy for all library materials acquired by Syracuse University Libraries.

Policy Guidelines

All binding and retention decisions should be made according to four main criteria:

1. The importance of the material to the collection
2. The anticipated use of the material
3. The accessibility of the material, i.e., whether or not the material is indexed or cited in bibliographies and, if so, whether we own the index or bibliographies
4. The availability and desirability of alternative formats.

Procedures

A. New Monographic Material

The responsibility for binding/retention dispositions should rest with the individual bibliographer. Such dispositions should be indicated in the following manner:

1. When an item which is known to be a paperback is ordered, the binding disposition may be: regular bind/laminate/pressboard/review on receipt.

2. When a paperback item is received without a prior disposition, it will be placed after cataloging on the shelves adjacent to Approval Plan items for review by the relevant bibliographer and subsequent disposition. Such material will be displayed there awaiting the bibliographer's recommendation for a period of two weeks. Should no recommendation be made by the bibliographer within that time period the material will be forwarded to the Binding Committee for decision.

B. Serial Items

1. When a new periodical or serial title is ordered, bibliographers are asked to give a binding or retention recommendation in the working notes on the order form. This recommendation may be: catalog and bind after one year/or, complete volume, retain in alternate format, review after one year/or complete volume, etc. Such recommendations will be reviewed by the Binding Committee at the time when it first goes into effect.

2. For material which has accumulated for some time without a binding/retention decision, a complete volume or all unbound issues from the Periodical Reading Room shelves will be gathered together, a Binding Decision form will be affixed and the material will be shelved next to the Approval Plan material in Technical Services. Such material will be displayed there awaiting the bibliographer's recommendation for a period of four weeks. The bibliographer's recommendation will be reviewed by the Committee its next meeting. Should no recommendation be made by the bibliographer within that time period (and barring such circumstances as illness or vacation) the material will be forwarded to the Binding Committee for decision.

3. A "sunset" review procedure should be undertaken at regular intervals for all periodical and serial items by the individual bibliographers. Detailed procedures for performing and standardizing this review mechanism need to be discussed with Collection Development personnel but the review should address such questions as retention, cancellation or continuation of the subscription, binding, alternative formats, etc. for each title.

THE UNIVERSITY OF GEORGIA
THE UNIVERSITY LIBRARIES
ATHENS, GEORGIA 30602

PROCESSING DIVISION

November 11, 1976

University of Georgia Libraries Binding

PLANNING DOCUMENTS
University of Georgia
4 pp.

I. Types of binding services required

A. Sewn binding

1. Books
2. Periodicals

B. Glue binding

1. Books
2. Magazines

C. Standardized periodical binding
D. Thesis binding
E. Book cases
F. Music score binding
G. Oversized binding

1. Maps
2. Newspapers

H. Book restoration
I. Rare book restoration

II. Specification of binding desired

The easiest type to specify is book binding and the most difficult is rare book restoration.

III. Competitive bidding

There is no competitive bidding.

IV. Supplier and how selected

A. Past suppliers (last ten years)

Rare book restoration. Firm went out of business and no replacement for the firm has been selected.

2. [redacted]
   General library bindery used for a very brief time for book binding but was dropped because of quality of work and distance from Athens.
3. [redacted]
   Thesis binding. Firm ceased offering the service.

B. Present supplier

[redacted]

C. Selection of binderies

1. Rare book restoration

   a. Reputation of firm
   b. Quality of work performed
   c. Demonstrated security provided by firm for Libraries' rare material.
   d. Costs

2. General binding

   a. Length of time required for firm to perform work and return to Libraries

      (1) Libraries require most binding to be returned in twenty-eight calendar days with all reference material, heavily used periodicals and selected other titles returned in fourteen working days.
      (2) Libraries require bindery to pick up and deliver at least every two weeks.
      (3) Libraries require the ability to receive finished work within seventy-two hours for selected titles.
      (4) Libraries require binding for other locations (Tifton, Griffin, Sapelo, and Skidaway) to be returned within twenty-eight working days.

   b. Quality of work

      (1) Bindery must perform work according to specifications approved by the American Library Association and the Library Bindery Institute.

(2) Bindery must be capable of performing work according to Libraries' specifications which can exceed those set forth by the American Library Association and the Library Bindery Institute
(3) Bindery must be capable of performing restoration of non-rare material.

c. Quantity of work

Bindery must be capable of accepting the Libraries' quantity of work (40,000 -- 50,000 volumes per year) and still returning material on schedule and performing the high quality required.

d. Bindery's concern with the Libraries' development

(1) Bindery management must be willing and able to make frequent visits to the Libraries and inspect their finished work to determine if their work is meeting the demands of the Libraries' staff and patrons.
(2) Bindery management must be willing and able to visit the Libraries whenever necessary in order to discuss the binding of complicated titles.
(3) Bindery must be willing and able to provide special pick up and delivery services for other locations (Tifton, Griffin, Sapelo, and Skidaway).
(4) Bindery management must be willing and able to accept frequent visits by the Libraries' of the bindery facilities.

e. Integrity of Bindery

(1) Bindery must be willing to stand behind its work and perform work a second time if it does not meet the requirements of the Libraries!
(2) Bindery must be willing to replace damaged material by securing the item themselves through the book trade and not merely crediting the Libraries' with the cost of the item.

f. Bindery's requirements of the Libraries

Bindery must have simple preparation requirements of the Libraries

g. Costs

(1) Bindery's costs must be the same or lower than those charged by other firms providing the same services.
(2) Bindery's pricing structure must not have hidden charges: Bindery must include in their basic charge the cost of hinges, collation, extra thickness, and tail lines.
(3) Bindery must be willing to give Libraries' a discount in view of large quantity of work performed.

V. Total cost of binding

The Libraries budget ten percent of annual book expenditures for binding. This percentage is in line with other libraries belonging to the Associationof Research Libraries (See Association of Research Libraries. ARL Statistics 1974-1975. Washington, 1975.)

VI. Personnel involved in binding

A. What decisions are made

1. Whether to bind or not
2. How to bind
3. Most binding decisions relate to periodcials as the bulk of binding in a large research library is the binding of periodicals. It is only through the proper binding of periodicals that a research library develops the most important aspect of its collection.

B. Who makes decisions

1. Routine decisions are made by Senior Library Assistants
2. Complex decisions are made by a Librarian II who has extensive training in binding and bibliography

Report prepared by

John A. Edens

John A. Edens
Assistant Director of Libraries
for Processing

JAE:jmm

New England Document Conservation Center

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George M. Cunha
Director/Conservator

June 23, 1976

PLANNING DOCUMENTS
Dartmouth College
9 pp.

Mr. Walter Wright
Chief of Special Collections
Dartmouth College
The Library
Hanover, New Hampshire

Dear Mr. Wright:

The following report is the result of the survey I conducted at the Baker Library and the Dana Biomedical Libraries on April 14, 1976. Attached to this report are copies of our survey forms detailing my observations. I hope that this report will aid you in your long range planning for the preservation of your materials as well as point out some specific areas in which preventative measures taken now, would greatly reduce the level of restoration necessary in the future.

My report will consist of three major sections; the first being a general review of the causes of deterioration; the second, specific recommendations relating to the Baker Library; and the third, specific recommendations relating to the Dana Biomedical Library.

Section I

In order that my comments and recommendations have a ready reference I devote this section to a description of the general causes of the deterioration of library materials.

The most important factors are:

1. Organisms - macro and micro
2. Temperature and relative humidity
3. Acids present in the material or added to it
4. Light
5. Air pollution and dirt
6. Physical housing
7. Injurious foreign objects
8. Disasters and security

The New England Document Conservation Center is governed by the New England Library Board

Charles Joyce, Chairman; Director
Massachusetts Bureau of Library Extension

John A. McCrossan, Secretary; State Librarian,
Vermont Department of Libraries

Avis Duckworth, Treasurer;
New Hampshire State Library

J. Gary Nichols, Vice-Chairman; State Librarian
Maine State Library

Jewel Drickamer; Director
Rhode Island Department of State Library Services

Charles E. Funk, Jr.; State Librarian
Connecticut State Library

1. Organisms cause the most damage to library materials. People can steal or mutilate material, effectively destroying it. In a less obvious fashion, they can break spines while copying, or render it necessary for repair by tearing pages or scratching film. Even more obscure, and while well-intentioned but equally dangerous, is the use of pressure sensitive tape to repair tears because it raises the cost of eventually restoring the paper by a minimum of 100% and is at best only a temporary solution. Insects and vermin can destroy library material as well; rats and mice can chew the paper to make nests or chew the spines for gelatin and starch to eat; cockroaches, silverfish, termites also enjoy many of the materials as food. Traveling down the biological ladder, micro-organisms, fungi, bacteria and yeasts all find library materials excellent foodstuffs. These dangers can be eliminated by education, pest control and maintaining a proper environment.

2. Temperature and Relative Humidity. The temperature of material greatly influences its lifespan. High temperatures accelerate chemical reactions. A common rule of thumb is that the reaction rate doubles for every 10°c the temperature rises. Low temperatures cause plastic materials to become stiff and more liable to damage when handled, as well as introducing a problem of condensation if warm or more humid air comes in contact. High humidities cause materials to expand and even become wet when combined with high temperatures. The conditions become ripe for micro-biological growth with low temperatures the water damage from condensation. Low humidities cause dessication and embrittlement. Wide fluctuations in these two factors create physical stresses which can literally cause a book to fall apart on the shelf. The optimum temperature and relative humidity for books and papers which provides the longest useful life while permitting patron use is 70° ± 5°F. and RH 50-60% for paper maintained constantly 365 days a year, 24 hours a day. If this is not economically feasible, then a constant environment is preferable to one that fluctuates constantly and widely. For film, recording tape and discs, these two factors are more critical and should be maintained at 65°F and 40% RH year round.

3. Acids - Paper, cloth and leather are all attacked by acid in the presence of water. Called acid hydrolysis, this reaction breaks the molecular bonds of the material causing it to become brittle and usually discolored. Acids can be present from the manufacturing process or in the case of most paper made after 1860, can be introduced as acidic

gases from air pollution or as organic acids from the skin. This can be corrected by chemically neutralizing the acids and depositing a buffer to react with future acidic contamination which at the present time involves an expensive restoration process. For the avoidance of future problems the use of non-acidic permanent durable materials for any permanent addition to the collection would save countless dollars in future restoration costs.

A similar problem is present in residual chemicals left in films by incomplete processing and this can also be averted by insisting on archivally manufactured and processed films stored in acid alum free containers in the prescribed environment.

4. Light, especially the ultra-violet and near ultra-violet component has the energy to break chemical bonds and cause colors to fade and paper and leather to disintegrate. This can be avoided by insuring that sunlight which contains a large UV component does not reach library materials by drawing shades or placing UV screening on windows which absorb the majority of the harmful radiation. Fluorescent bulbs also have a large ultra-violet component which can be obviated by placing shields which absorb this portion of the spectrum - see attachment from Solar Screen for low cost sleeves or another manufacturer is Rohm and Haas.

5. Air pollution is a source for acidic gases as described previously It also contains aerosols which attract dust, dirt and fungal spores. The dirt and dust can act as growth sites for microorganisms as well as disfiguring paper and books and act as abrasives for film, discs and tapes if allowed to accumulate.

A thorough periodic housekeeping can minimize these problems and I am enclosing an article on housekeeping as well as procedures for cleaning bookstacks.

6. Physical housing — books are physical structures which can break down if they are housed in such a way that stresses are formed that the structure was not designed to cope with. In practical terms this means shelving books vertically, supported on all sides if possible. For oversize volumes this means shelving flat, no more than one per shelf if possible; if not, then no more than three with an interleave to prevent abrasion to the cover. Likewise, phonograph records should be stored vertically with no compression, and tapes as well as film should be cleaned and rewound without excessive pressure.

7. Foreign Objects - paper clips and staples can rust and do puncture and disfigure; rubber bands deteriorate and release deletorious sulfur compounds which attack paper, film, and leather as well as to discolor and distort them. Pressure sensitive tape and rubber adhesives stain and embrittle paper and although easy to apply are extremely difficult to remove.

Acidic file folders, boxes and matting material for prints, manuscripts and film are also injurious because the acids migrate to adjacent material

8. Disasters and Security — in recent years the incidents of disasters and theft or vandalism has increased dramatically. Because of the cost of material, staff time, and restoration having also increased, it has become vitally important to rethink these problems on an administrative level and develop a specific program to minimize the probability of such occurences. Too often security and emergency systems consider only the monetary problems involved and, while these are important, the safeguards to material and people are equally important. Of the last five disasters we have responded too, the majority of the damage and losses could have been avoided by good planning and adequate alarm systems. Insurance can never repay the damages suffered in a disaster in terms of staff time and material which cannot be replaced. Therefore, we urge that a comprehensive evaluation of insurance coverage, emergency procedures, alarm systems and a definition of priority materials be developed in your library.

Section II

In general I found the Baker Library and in particular the Special Collections area and microfilm reading area to be exemplary. In terms of general care and attention to materials, the staff is to be commended for the obvious care with which they pursue their professional responsibilities. It was a pleasure for me to survey a library with so few maintenance problems.

The major problem I observed during my survey was the environment. The extremely low relative humidity and the large quantities of ultra-violet light have and will continue to exact their toll on your materials. The lighting problem can be partially obviated by the judicious drawing of shades, especially in the main stack areas to reduce direct sunlight and the installation of ultra-violet filters on all fluorescent bulbs. Inexpensive filters are available from Solar Screen (brochure enclosed); and another manufacturer of filters is Rohm and Haas.

The problem of low relative humidity is more difficult to solve. In area's you have the capability of adding moisture to the air but the misting device results in wetting areas close to it as well as adding moisture to the air. The engineering staff should be asked to evaluate this problem to see if a finer misting head can be attached or another method of adding moisture can be installed. This level of humidity is extremely injurious to adhesives and leather and must be corrected in the long run if you with your material to last as long as possible without expensive restoration.

The second area of concern is security. I observed that your system does not include smoke sensors but that you are considering their installation. I cannot urge this addition more emphatically. The adequate use of smoke sensors can alert the proper authorities to a problem before it becomes a major disaster. As a form of self-insurance they more than justify the expense. In a library of your scope the extra time gained in the event of fire can reduce restoration costs and loss by hundreds of thousands of dollars. I would suggest that if a centralized alarm system is to be considered in the future, that water sensors in the special collections area and the microfilm areas be included since this is the most common source of damage.

In terms of such disasters I strongly recommend that a disaster plan be developed which includes an education of the staff of the priorities for salvage and the use of emergency exits and equipment. Monetarily the most valuable space in any library is the shelf list and, after the personnel, it should be the first material to be secured in the event of a fire. The remaining priorities can only be determined by administrative study.

Because of the increasing number of thefts from academic libraries, I feel that serious thought should be given to tightening the security in the library. An alert and informed staff is the best security after all of the physical plant has been secured; however, the day to day obligations of service tend to inure one to the probability so that security is a good topic for quarterly review in staff meetings.

My third area of recommended change is maintenance. The excellent job that you have done is to be commended. There were only a few areas which needed attention to cleaning as noted on my forms. However, many of

your leather bindings could have their useful life extended by 100% by an in-house program of cleaning and oiling. (see enclosed sheet for instructions). In addition, many volumes would benefit from protective cases which would reduce significantly future damage and eventual restoration costs.

Towards this goal, I suggest the establishment of a preservation officer to be responsible for programs of this nature along the guidelines in the attached sheet. This could begin as a collateral duty of a present staff member but would eventually require full time attention. Administratively and practically this officer can literally save tens of thousands of dollars in replacement and restoration costs. Such a position could utilize student help to construct protective cases, make folders for maps, establish an on-site program of simple restoration; i.e. deacidification of maps, mylar encapsulation, simple mending, etc.

My fourth area of concern is the storage of oversize materials. This is a problem faced by all libraries and is never completely solved. However, in the Art Library and in the Map Area an additional effort should be made to store oversized materials flat so that the structural damage now occuring can be stopped. The reason for this condition is obviously limited space available but since these are growing collections, the current problem will only be exacerbated in coming years and plans should be made now for proper storage.

During my survey, I took samples of paper you are currently using for making folders for broadsides, prints, etc. Although this material tests as satisfactory with an archivist's pen, my tests show that this paper contains groundwood which degrades rapidly and contaminates any material it touches. You should discontinue its use in the collection and replace it with a permanent durable folder stock such as Permalife paper or Warren's Olde Style 70 or 80# stock if the weight is important. With a Barrow's test kit you can check storage materials for alum sizing and ground wood as well as pH.

My last major observation resulted from my subsequent survey of the Dana Biomedical Library. While this library contains a remarkable collection of rare and valuable volumes, it does not have the physical plant or the staff to maintain or protect them. While numerous alternatives are available such as creating a rare book environmental security system in Dana, it would seem that in the interests of economy and utilization of staff expertise that these or the majority of these volumes be should

transferred to special collections in the Baker Library. The importance of having physical and bibliographic continuity in a special collection should not be underrated, and the problems of security and maintenance can be simplified. In addition, a survey of the other libraries should be made to determine if any materials should be more appropriately housed in special collections. This should be a college wide survey designed to insure that all materials in general collections are reviewed periodically for transfer to special collections.

I have a few more specific recommendations and comments to amplify the observations made on the survey forms. As a policy, copies of material on photostatic paper or verifax or similarly unstable materials should be segregated physically from more durable paper is in the Broadside Collection. This can be accomplished by placing such copies in permanent folders following the original material so that a physical barrier exists.

In scrapbook collections, such as the Roberts Correspondence, interleaving with Interleaf Vapor Phase Papers would provide a temporary holding action against deterioration.

All of the volumes in the second level vault should be inspected periodically to insure that no microbiological problems have arisen. A weekly random sampling of all areas is a good practice to initiate to foster awareness of physical plant problems and often potentially hazardous situations. Particular care should be taken to inspect those areas in which damage is more likely to occur. While ideally, no material should be stored in these areas considerations of space sometimes dictate that they be used. It is provident in such cases to insure that valuable or important material is not stored in these high problem areas. Specifically under windows, under steam pipes or indirect contact with air flow either in or out.

The microfilm reading area is the best designed area for user convenience I have observed in a library. With the growing emphasis on film publications and the importance of film as a preservation tool to reduce handling of original material, it was particularly rewarding to see such careful planning for future needs.

The microfilm storage areas should be maintained at 65°F and 40% relative humidity constantly. Because of the susceptability of film to damage from moisture and microbiological attack, and the high cost in terms of material stored per cubic foot, it is extremely important that no water pipes be permitted in a film storage area. If this is not feasible, the cost of protective shielding to contain leaks or drips and confine water in the event of a break is an investment well worth making. In addition sunlight should not fall on or near any storage cabinets.

Because of the high temperature differential sunlight creates when it shines on metal, often localized condensation developes and raises the humidity to the level that promotes fungal growth. I recommend the installation of a recording hydrothermograph to monitor the conditions in this area and to consult with the engineering staff if the records indicate continual high humidities.

The purchase of an additional unit for the special collections areas which could be rotated through these areas would give a more accurate profile of the changes in the physical plant and operation parameters of your mechanical systems that would best prolong the life of your materials.

The general stack areas are well maintained; however, these too could benefit greatly from a periodic oiling of leather bindings. The most severe damage is caused by the ultra-violet light from the windows. Consideration should be given to the use of shades or eventually double glazing with an ultra-violet filtering plexiglas to reduce this damage and provide added insulation.

The technical services department is providing excellent service and I observed nothing that needed changing in terms of preservation. The expansion of your capacity to make utilitarian protective cases should be considered in your long range planning. Many rare books that do not justify the expense of complete restoration can have their lives extended many fold by the physical protection of such cases.

In the Map Room, I viewed several maps that were in need of immediate treatment, however, this, as in the rest of the collection must be a decision by the administration as to the priorities for preservation because of the size and uniqueness of your special collections. Rather than point out specific items which might obscure the overall picture of the library's preservation problems, I would recommend that specific collection be analyzed for long term projects. For example, the

Map collection; by reducing the number of maps in each folder and insuring that all maps are in folders much physical wear and tear can be averted. A program of deacidification, mending and mylar encapsulation could be instituted to insure that new material will not become a restoration problem in 15 to 20 years. This could be part of an in-house program at minimal expense. The center would be able to train the appropriate person in the necessary techniques which would be applied to archival collections, broadsides and pamphlets as well. By the end of 10 years the map collection could be a fine example of preservation with material that would last 100 years or more instead of 10 to 20 without need for treatmsnt.

The Frost Collection; although much of this material is currently in useful condition much of it is written and printed on paper with inherent defects which will embrittle and discolor within the next 10 to 15 years. If these problems were treated now in a two year project the costs in terms of today's dollars would be one tenth to one one-hundredth of what they would be when the material has become brittle and needs mending. In addition, by stopping the degradation process before paper has lost its strength you not only preserve the paper but also have it in a strong usable form which is possible only by reinforcing when the process has progressed to the point of necessity.

A similar program of preservation should be instituted for all special collections and the priorities determined so that 10 years hence you are not faced with an insurmountable problem so familiar in other libraries. It is this consideration that leads me to re-emphasize my recommendation for the establishment of an administrative preservation officer who can coordinate and plan for the certain problems of the future on a comprehensive basis.

In conclusion, I would like to reiterate my observation that your library is exceptional in the care and maintenance of its collections. I have rarely had the privelege of seeing so few problems.

Your interest in the problems of preservation before the crisis stage indicates you intend to keep it a model academic institution. If I can amplify this report or give any further assistance, please let me know.

Sincerely yours,

Thomas W. Duncan

Thomas W. Duncan
Field Service Director